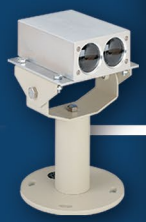
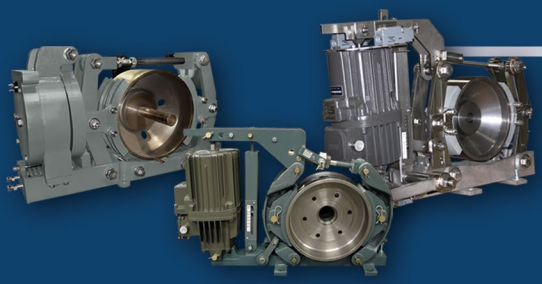
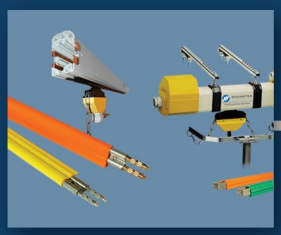
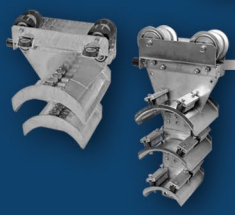
MAGNETEK
MATERIAL HANDLING

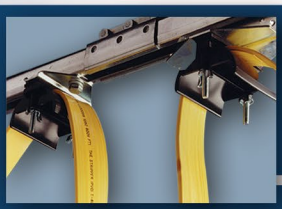
PRODUCT GUIDE











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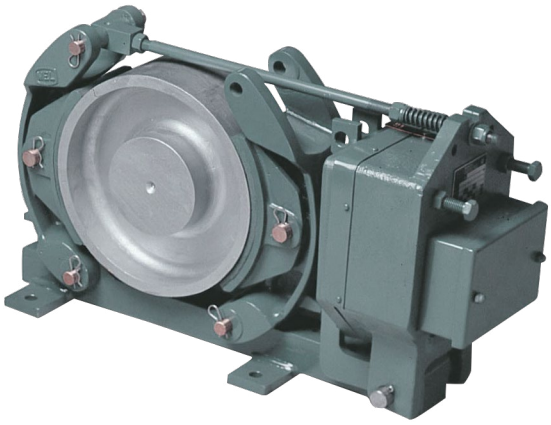
200S GENERAL PURPOSE INDUSTRIAL SHOE BRAKES

Features and Benefits

- Compact size/low shaft height
- Designed for industrial duty applications requiring minimal maintenance
- Suitable for many VFD crane applications
- Compact size allows for easy retro-fit applications
- Few moving parts resulting in minimal wear/high reliability
- Can be used in nearly all applications and industries
- EMG Eldro thruster – the most reliable and versatile thruster on the market
- MST/E Brake available with Auto-Adjustment for lining wear and Auto-Equalization of shoe clearance
- Offers a lower cost alternative to the 300M shoe brake
- CSA approved

AC, DC, HYDRAULIC, PNEUMATIC ACTUATORS
4" – 19" WHEEL DIAMETERS
6 – 2,650 LB. FT. TORQUE



Type MSH

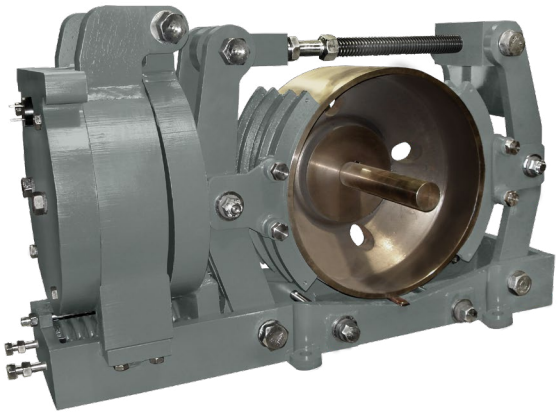
- Hydraulically operated brake

300M AIST MILL DUTY SHOE BRAKES

Features and Benefits

- Reliable braking, minimum downtime
- Mill duty design requires minimal maintenance in severe duty and harsh environments
- Side removable shoe design allows for easy replacement
- Separate encapsulated DC coil allows the coil to be changed while the brake remains set (MBE)
- Auto-equalization and Auto-adjustment

AC, DC, HYDRAULIC, PNEUMATIC ACTUATORS
5" – 30" WHEEL DIAMETERS
10 – 11,000 LB. FT. TORQUE



Type MBT and MBE Standard Features

- Internal torque spring (MBT)
- External torque spring (MBT/E)
- Bushings at main pivot points
- Corrosion resistant hardware
- EMG Eldro Hy-Thrust actuator
- Easily replaceable brake shoe
- Non-asbestos brake linings
- CSA approved (MBT only)

Type MBT and MBE Stainless Steel Features

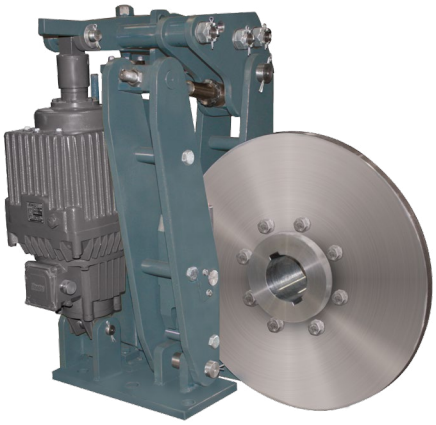
- 304 stainless steel design
- Stainless steel bolted bearing assembly

Type MBM

- Hydraulically operated brake

400D HEAVY DUTY BRAKES

AC, DC, HYDRAULIC ACTUATORS
8" – 50" DIAMETER DISC RANGE
50 - 30,000 LB. FT. TORQUE

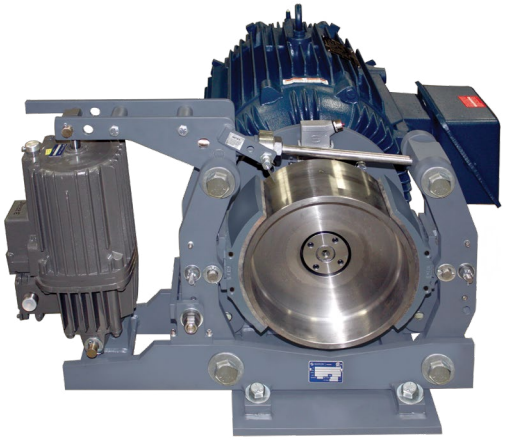


Features and Benefits

- Specifically designed for high speed, high performance fast response and E-stop applications
- Suitable for bulk handling, container handling and movable bridge applications
- Replace existing disc brakes or drum brakes in high duty cycle, high speed, or high torque braking applications
- DIN or AISE mounting bases

Standard Features

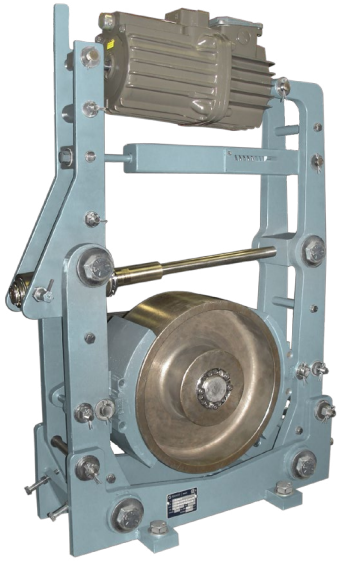
- External torque spring
- Auto-adjustment and Auto-equalization
- Steel-backed anti-friction bronze bushings
- Stainless steel pivot pins
- Easily replaceable brake pads
- Non-asbestos brake pads
- CSA approved



MOTOR MOUNTED BRAKES

Features and Benefits

- Features the brake already mounted on the opposite drive end of the motor, or the brake and hardware may be sold seperately for mounting to the motor on location
- Eliminates brake pedestal
- Eliminates alignment issues
- Can be purchased as a pre-assembled engineered “package"
- Installs as a complete assembly
- Lower cost alternative to many of the “oil shoe" brakes promoted by some OEMs



VERTICAL BRAKES

Features and Benefits

- Vertical design of the AIST 300M Mill Duty Shoe brake - thruster is mounted above the brakewheel rather than on one side
- Meets the same requirements as our horizontal MBT brakes and delivers the same rated torque with minimal maintenance and downtime
- Great fit when space is restricted by related machinery, structural components, or worker access requirements where a standard horizontal brake does not fit
- Features fabricated steel construction and is designed for use in heavy-duty environments

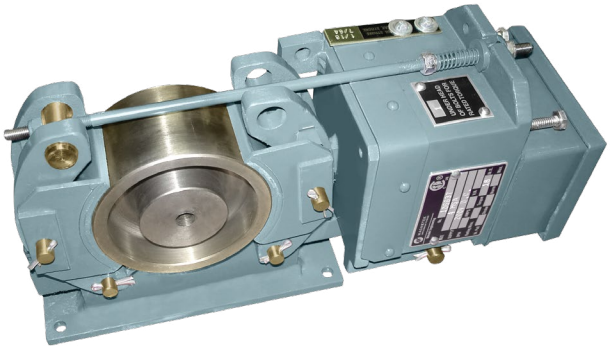
BRAKES

DROP-IN BRAKES

Replacements for a variety of manufacturer's brakes, including GE, EC&M, Wagner, Bubenzer, Gemco, Johnson, Whiting/Sesa, Square D, Cutler-Hammer, Westinghouse, and Perigrip

Benefits

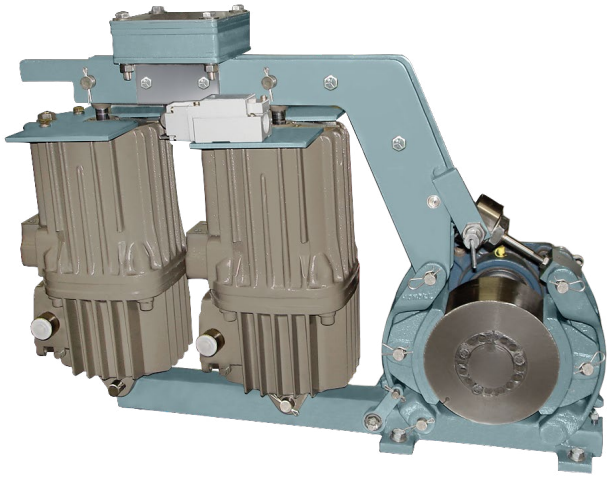
- Installation cost savings
- Single source brake supplier
- Replace obsolete brakes without structural rework



CUSTOM ENGINEERED BRAKES

Features and Benefits

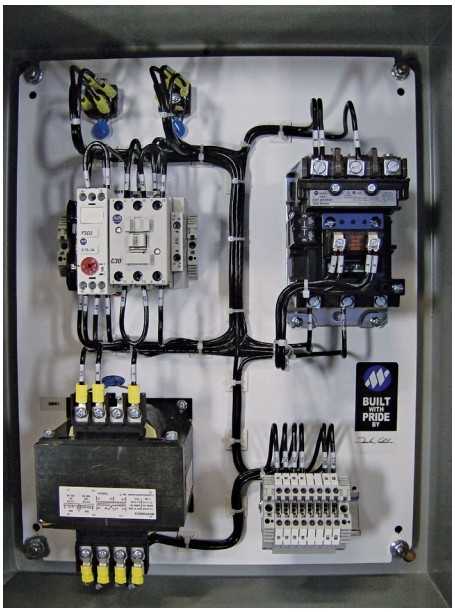
- Stainless steel frame hardware and links
- Nitride heat treat corrosion protection
- Special mountings (wall, ceiling)
- Manual brakes
- Special coatings and finishes
- Unique torque and dimensional requirements



ELECTRO-HYDRAULIC THRUSTERS

Features and Benefits

- Wide range of sizes to replace thrusters used on Bubenzer, Hillmar, Sekarb, Siegerland Bremsen, Hindon, Sibre, GE, ZPMC, Galvi, and Johnson brakes
- Fast response – 2000 cycles per hour
- Extending forces from 50 lbs. to 900 lbs.
- Strokes from 2 to 7.8 inches
- Can be stalled at any stroke position without damage
- Operating ambient temperature -13°F to +122°F with standard fluid (other ranges available)
- Class F insulation
- Aluminum housings



BRAKE ACCESSORIES

Rectifiers/Controllers

- Converts AC power to DC power for use with certain types of 200S General Purpose Industrial Brakes and 300M AIST Mill Duty Brakes
- Available in enclosures or on backing plates for panel mounting

Brake Wheels

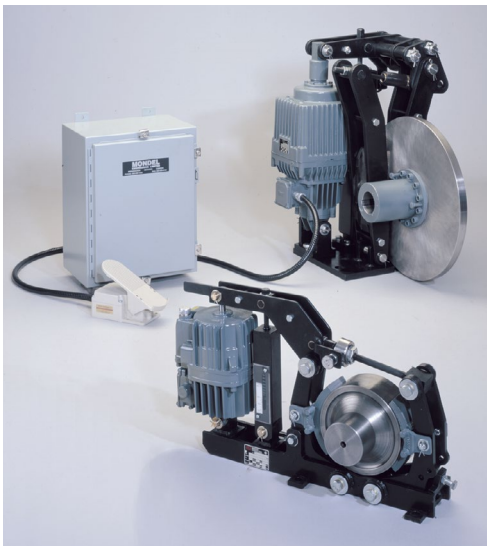
- Manufactured from ductile-iron alloy
- Completely machined to provide proper balance at normal operating speeds
- Available for 200S General Purpose Industrial Brakes and 300M AIST Mill Duty Brakes

Couplings

- Eliminate the need for expensive double shaft extensions on motors and gear boxes
- Useful in situations where space is limited
- Available for 200S General Purpose Industrial Brakes and 300M AIST Mill Duty Brakes

Brake Enclosures

- Guard against damage from dust and moisture and also serve to retain heat
- NEMA 3R and 4x ratings



BRAKETRONIC® CONTROLLER

Features and Benefits

- Proportionally control a single or multiple Mondel thruster operated brake by a foot pedal, master switch, radio control, or selectively from either
- Ideal for new applications or replacement of existing hydraulic systems
- Adjustable torque brake performance
- Fail-safe emergency braking
- Drift point compatible
- 250 Vdc, 230/460/575 Vac-3Ph, 115/230-Single Ph
- Custom application engineering available

System Includes

- Braketronic Controller
- Standard Pre-Engineered Panel
- Optional Mill Duty Foot Pedal

COLLISION AVOIDANCE SYSTEMS

REFLX® DISTANCE DETECTION AND COLLISION AVOIDANCE SYSTEMS

Features and Benefits

- Limits potential for crane-to-crane or crane-to-object collisions
- Helps keep your overhead material handling system up and running safely
- Ideal for use with all types of adjustable frequency drives and stepped controls
- Use the reliable, solid-state control board as a stand-alone unit, or remove from its enclosure and mount as one piece on an existing control sub-panel
- 220 Vac, 250 Vdc, or 350 Vdc
- The ReFlx 120 system features a two-channel infrared sensor, which can be adjusted to give separate outputs for each channel at distances from 20 to 120 feet
- The ReFlx 120 "Plus" system provides an extra measure of safety with the addition of a second, shorter range sensor, which is most commonly used as a redundant stop command

LASERGUARD™ COLLISION AVOIDANCE SYSTEMS

Features and Benefits

- LaserGuard is the most technologically advanced anti-collision system in the industry
- Limits potential for crane-to-wall and crane-to-crane collisions
- System uses self-monitoring optical lasers to monitor your crane's position
- Multiple cranes are protected when they are in motion on the same runway
- Built-in self diagnostics
- LaserGuard has a range of 150 feet and can be adjusted for three individual contact closures within the range
- Class 1 laser meets or exceeds all OSHA 6 environmental regulations
- NEMA 4X housing and Class 1 laser have a rated life of more than 10 years
- Standard 85-240 Vac, optional power supply of 10-80 and 180-300 Vdc

IMPULSE®•G+ SERIES 4 ADJUSTABLE FREQUENCY CRANE CONTROLS

- Magnetek's new IMPULSE•G+ Series 4 drives continue our tradition of providing the most reliable and cost-effective adjustable frequency crane controls available
- Industry-leading safety and performance features combine with our superior application expertise to provide unmatched performance for your material handling system
- Backed by our industry-leading three-year warranty
- Can be used as an open-loop vector or V/F crane control for traverse motions or mechanical load brake hoists

Features and Benefits

- Load Check II™ continuously detects hoist overload conditions, halting upward motion and only allowing the load to be lowered
- Safe Torque Off provides a redundant hardware safety circuit that guarantees motor and brake power are removed when an E-STOP switch or safety controller opens the drive input, eliminating the need for external disconnects
- Adaptive Ultra-Lift™ allows for hoist operation above base speed with a light load or empty hook. Adaptive Ultra-Lift continuously monitors motor torque and adjusts motor speed to operate at peak performance, improving plant safety and maximizing throughput
- Brake Test verifies brake torque with the press of a button, capturing breakaway torque with a monitor parameter on the keypad, determining the condition of the brake so you can perform preventative maintenance and quickly commission the crane
- Quick-Set™ parameter group makes drive setup even easier. The drive populates a single menu with the most frequently used parameters based on the motion and speed reference selected

RATINGS

200-240 Vac, 3.0 TO 415A (0.75 TO 150HP)
380-480 Vac, 1.8 TO 1090A (0.75 TO 900HP)
500-600 Vac, 1.7 TO 200A (1 TO 200HP)

CLASS OF SERVICE

CMAA CLASS A-F SERVICE
AISE TR6 CLASS 1 TO 4
ASME HST–4M H1 TO H5

IMPULSE®•VG+ SERIES 4 ADJUSTABLE FREQUENCY CRANE CONTROLS

- Magnetek's new IMPULSE•VG+ Series 4 drives continue our tradition of providing the most reliable and cost-effective adjustable frequency crane controls available
- Industry-leading safety and performance features combine with our superior application expertise to provide unmatched performance for your material handling system
- Backed by our industry-leading three-year warranty
- Can be used as a closed-loop flux vector crane control specifically designed for non-mechanical load brake hoists and high performance traverse motions

Features and Benefits

- Load Check II™ continuously detects hoist overload conditions, halting upward motion and only allowing the load to be lowered
- Safe Torque Off provides a redundant hardware safety circuit that guarantees motor and brake power are removed when an E-STOP switch or safety controller opens the drive input, eliminating the need for external disconnects
- Adaptive Ultra-Lift™ allows for hoist operation above base speed with a light load or empty hook. Adaptive Ultra-Lift continuously monitors motor torque and adjusts motor speed to operate at peak performance, improving plant safety and maximizing throughput
- Brake Test verifies brake torque with the press of a button, capturing breakaway torque with a monitor parameter on the keypad, determining the condition of the brake so you can perform preventative maintenance and quickly commission the crane
- Quick-Set™ parameter group makes drive setup even easier. The drive populates a single menu with the most frequently used parameters based on the motion and speed reference selected
- Anti-Shock automatically stabilizes loads by detecting and minimizing rapid increases in motor torque, reducing the potential for crane damage caused by operator induced load shock

RATINGS

200-240 Vac, 3.0 TO 415A (0.75 TO 150HP)
380-480 Vac, 1.8 TO 1090A (0.75 TO 900HP)
500-600 Vac, 1.7 TO 200A (1 TO 200HP)

CLASS OF SERVICE

CMAA CLASS A-F SERVICE
AISE TR6 CLASS 1 TO 4
ASME HST–4M H1 TO H5

IMPULSE®•G+ MINI ADJUSTABLE FREQUENCY CRANE CONTROLS

- Low horsepower IMPULSE•G+ Mini is our easiest to program drive to-date, with X-Press Programming™ providing fast set-up in minutes to get your drive up and running quickly
- Compact design permits the use of smaller control enclosures, reducing overall cost of an installation
- Expands application opportunities on smaller cranes, hoists, trolleys, and monorail carriers
- Features an expanded HP range and an identical dimensional footprint as the IMPULSE®•P3 Series 2 (up to 5HP) and a smaller footprint beyond 5HP
- Basic programming access level provides parameter availability and navigation that is nearly identical to the IMPULSE•P3 Series 2
- Advanced control mode offers you all our basic control mode features, plus, with a single parameter access level adjustment, it can be opened up to utilize all the advanced features and programming capabilities without reconfiguring

Features and Benefits

- Safe Operating Windows™ — reduces possibility of programming unsafe parameters
- Motor Thermal Overload Protection — reduces possibility of motor damage
- Quick Stop™ — reduces possibility of crane collision
- EN954-1 Safety Category 3, Stop Category 0 — Hardware Base Block circuit
- Certifications — CE, UL, cUL, RoHs, TÜV
- X-Press Programming™ — allows programming initial setup within seconds
- Swift-Lift™ — allows overspeeding with light loads or empty hook
- Reverse Plug Simulation™ — allows operator to smoothly and quickly stop and change directions without setting brake
- Auto-Tuning — non-rotation auto-tuning for performance demanding applications
- UL Recognized Electronic Thermal Overload

RATINGS

380-480 Vac, ½ TO 20 HP

200-240 Vac, ¼ TO 20 HP

IMPULSE®•T ADJUSTABLE FREQUENCY CRANE CONTROLS

- IMPULSE•T makes drive programming so easy you can get cranes up and running in a few simple steps. This affordable drive platform is the ideal solution for contactor control upgrades and basic modernizations
- Preventative maintenance monitors provide the feedback you need to proactively schedule maintenance and minimize downtime
- IMPULSE•T is a low-cost, easy-to-configure option available as a packaged drive or in a pre-engineered standard panel

Features and Benefits

- Motor Thermal Overload Protection - reduces possibility of motor damage
- X-Press Programming™ - allows programming initial setup within seconds
- Certifications - UL, cUL, RoHS
- Maintenance timers - operations, cooling fan, soft charge bypass relay, and IGBT
- UL recognized electronic thermal overload

RATINGS

380-480 Vac, ½ TO 5 HP
200-240 Vac, ¼ TO 3 HP

CLASS OF SERVICE

CMAA CLASS A-D SERVICE

IMPULSE®•R AC LINE REGENERATIVE SYSTEM

- Designed to provide a low-cost solution to add line regeneration to overhead cranes
- Units take surplus regenerative energy from the motor and return it to the AC power source, reducing total energy consumption and improving energy efficiency
- Eliminates wiring for dynamic braking resistors and their maintenance while providing cost savings and improving energy efficiency

Features and Benefits

- Sized identically to the connected variable frequency drives and can be easily retrofitted to replace dynamic braking units and resistors on existing controls
- Ideal for high duty cycle cranes, large cranes with multiple resistor banks for each motion, and severe duty, dusty, wet, or volatile environments
- Can be combined with IMPULSE®•G+ or VG+ Series 3 or 4 Adjustable Frequency Drives

RATINGS

200-230 Vac, 5-50 HP
380-460 Vac, 5-100 HP

IMPULSE®•D+ AC LINE REGENERATIVE SYSTEM

- IMPULSE•D+ system is a high-performance regeneration unit in a chassis drive layout
- Units take surplus regenerative energy from the motor and return it to the AC power source, reducing total energy consumption and improving energy efficiency
- Combining with IMPULSE®•G+ or VG+ Series 4 Adjustable Frequency Drives provide the most energy efficient, durable, and feature-rich crane control system available

Features and Benefits

- Active Front End technology allows the IMPULSE®•D+ to minimize line harmonics below IEEE 519 requirements and regulate a consistent DC bus voltage
- Ideal for high duty cycle cranes, large cranes with multiple resistor banks for each motion, and severe duty, dusty, wet, or volatile environments
- Units eliminate wiring for dynamic braking resistors and their maintenance while providing cost savings and improving energy efficiency

RATINGS

200-230 Vac, 5-50 HP

380-460 Vac, 5-100 HP

IMPULSE®•D+ HHP AC LINE REGENERATIVE SYSTEM

- Units take surplus regenerative energy from the motor and return it to the AC power source, reducing total energy consumption and improving energy efficiency
- A modular, regenerative inverter platform designed with reliability and serviceability in mind
- Units exceed the requirements defined by IEEE 519 and the common bus architecture allows the drives to share energy

Features and Benefits

- Enclosures are offered with open chassis, NEMA 1, forced air cooled, or air conditioned options
- Utilizes Active Front End technology to maximize crane control efficiencies with extremely low line harmonics
- Eliminates wiring for dynamic braking resistors and their maintenance while improving cost savings and energy efficiency
- Ideal for high duty cycle cranes, large cranes with multiple resistor banks for each motion, and severe duty, dusty, wet, or volatile environments

RATINGS

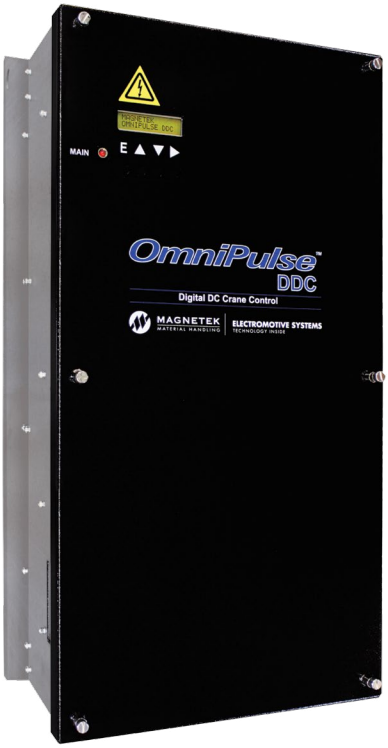
380-480 Vac

500-575 Vac*

*For higher voltage, contact Magnetek Material Handling

CONTROL PRODUCTS

OMNIPULSE™ DDC DIGITAL DC DRIVES

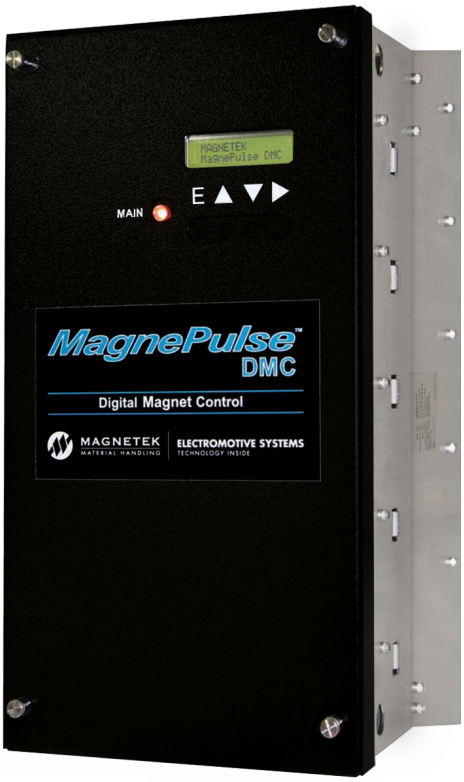


Features and Benefits

- State-of-the-art energy efficient OmniPulse DDC Drives improve the performance and reliability of your DC operated crane or hoist, while minimizing downtime, maintenance expenses and energy costs
- The smart choice in crane control that will pay dividends and provide your facility with a competitive advantage for years to come
- Semiconductor technology provides better control of motor speed and torque than costly, inefficient DCCP control, and reduces line power demand resulting in energy savings
- Microprocessor based, solid-state, four-quadrant DC-to-DC control is designed for series, shunt, or compound wound motors
- Comprehensive crane and hoist software provides superior flexibility during start-up and allows for quick parameter changes (software upgrades can be flashed from a PC)
- Improves safety in your facility by providing failsafe torque proving and load control software, ensuring the operator always has control of the material
- Perfect drop-in replacement for traditional electromechanical controls, eliminating routine and costly contactor tip replacement, reducing energy expenses, and easily interfacing with existing power and control circuitry using the same connection points in a smaller footprint

MAGNEPULSE™ DIGITAL MAGNET CONTROLS

- Built on Magnetek's proven OmniPulse™ DDC platform, this microprocessor based, solid-state, DC-to-DC control combines advanced safety and performance features to improve productivity and reliability in your facility
- Digital control of the magnet's demagnetizing current means the magnet cleans the load faster and more consistently, increasing throughput
- Retrofit easily into your current framework, using existing operator controls and connections



Features and Benefits

- Exclusive OmniBeam™ feature allows operators to enable any combination of up to four unique magnets to precisely match individual load requirements
- Flexible control options include single-input, dual-input, stepped-input, analog, or serial current references, as well as a programmable input to maximize magnet and crane performance
- Stepped current allows you to program the drive to lift/clean a single slab or a stack of slabs, reducing cycles and improving throughput
- 25 drive, magnet, and control status monitors check magnet current, voltage, resistance, temperature, DC bus voltage, and control variable to simplify process optimization
- Over-temperature protection utilizes the magnet's resistance to determine its temperature, preventing magnet damage and increasing life expectancy

RATINGS

200-300 Vdc

230/460/575 Vac

COMMUNICATION

RS-232/RS-485 MOD-BUS RTU

OMNIPULSE™ DSD DC CONTROL

Features and Benefits

- OmniPulse DSD is a state-of-the-art, fully programmable DC digital drive designed for crane, hoist, and heavy moveable structure applications
- Developed specifically to control DC shunt wound motors for bridges, trolleys and hoists
- Improves performance, safety, and reliability in your facility while minimizing downtime
- Easy to install and program
- Solid-state operation requires less maintenance
- Patented microprocessor digital logic controller delivers precise, repeatable AC in/DC out control
- Offers many of the advanced safety and troubleshooting features built into our IMPULSE® AC Drives, including UltraLift™, MicroSpeed™, Load Float™, torque proving, and end of travel limits
- Optional keypad has programmable operating features and computer diagnostics making customization, maintenance, and troubleshooting of the entire system easy
- Built-in regenerative braking provides power savings

MAC™•2000 SOFT START MOTOR ACCELERATION CONTROL

- Reduced voltage soft start for applications needing cost-efficient motor control
- Designed specifically to recognize high duty cycle start and stop and jogging conditions associated with overhead material handling applications

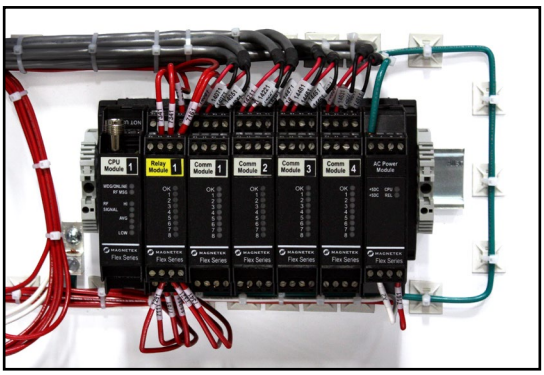
Features and Benefits

- Versatile design reduces the need to maintain inventories of units with various voltage and speed capabilities, common with other soft start products
- Units have been produced to recognize the needs of customers for a low-cost control device for less sophisticated applications
- Can be easily adapted to an existing contactor on a crane for single or two-speed applications or it may be ordered to use with a Magnetek pre-engineered contactor panel
- Includes adjustable starting torque and acceleration time, rugged construction for mounting on traveling crane and monorails, and voltage ramp reset for your crane control solutions

CONTROL PRODUCTS & CONTROL PANELS

RADIO DRIVE SERIAL INTERFACE (RDSI)

- Enables two-way communication directly from the drive, allowing you to access diagnostic and troubleshooting information such as drive status, output frequency, and load weight on the ground
- Displays feedback parameters directly from the drive, allowing you to access diagnostic and troubleshooting information such as drive status, output frequency, and load weight on the ground
- Automatically detects drive types, allowing you to communicate with all drives using only 4 wires and eliminates the need for relay cards and labor costs



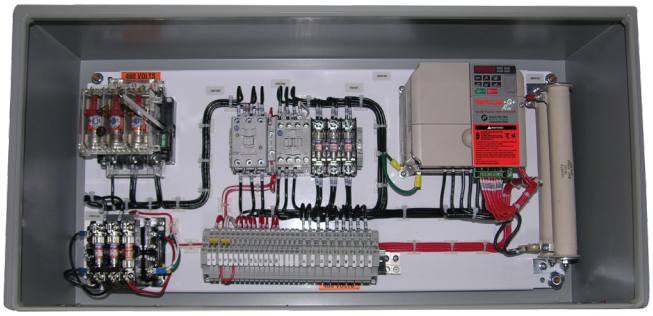
Features and Benefits

- Modular design enables plug-and-play compatibility with the Flex M receiver. Use the same receiver component for every application size – no switching necessary
- Communicates between receiver and drive using an RS-485 serial interface. Using a Flex M receiver, you can control up to two drives per serial communication card and can add another module to the receiver to enable additional drive pairs
- Improves safety through crane stoppage after any communication loss (either serial or RF transmission)

PRE-ENGINEERED COMPLETE CONTROL PANELS

Features and Benefits

- Magnetek offers pre-engineered panels featuring our high quality components designed for your specific application requirements
- Ideal for single motion control
- Easy to install, offer cost-effective and reliable operation, and are available for quick delivery
- IMPULSE®•G+ Mini drives and MagnePulse™ DMC drives can be purchased as part of a complete, pre-engineered motor control system



Standard Features Include:

- 120 Volt control interface
- Brake contactor
- Branch fusing
- Built-in electronic motor thermal overload protection
- Dynamic braking resistor(s)
- Basic wiring diagram
- All wiring to a single terminal strip
- Clearly marked wires (at both ends)
- NEMA 12 enclosure

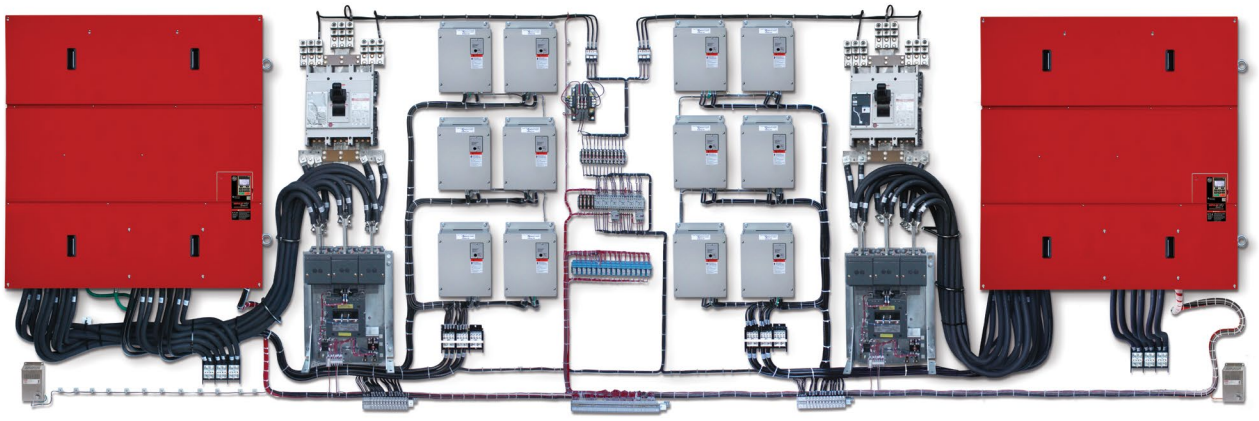
CUSTOM COMPLETE CONTROL PANELS

Features and Benefits

- Custom panels with IMPULSE®, OmniPulse™, and MagnePulse™ controls provide the ultimate solution for overhead material handling
- Built and designed to your specifications, these panels include all the standard features of our pre-engineered panels and can be customized with an unlimited number of configurations, components, and accessories
- Our skilled engineering staff provides technical support and overhead handling expertise
- Pair cULus certified control panels with our cULus certified resistors for a complete motor control solution

Available Custom Options Include:

- Enclosures for caustic and other environments
- Wiring for radio remote controls
- Mainline contactors
- Rod and flanged disconnects
- Control transformers
- Main circuit breakers
- NEMA brake contactors
- Load and line reactors
- Air-conditioning, cooling fans, heaters, and thermostats
- Enclosure insulation
- Selector switches
- Door mounted keypads
- UL 508 certification
- Custom software



DRIVE SUPPORT TOOLS

IMPULSE®•LINK 4.1 WIRELESS DIAGNOSTIC SYSTEM (WDS)

Features and Benefits

- Windows-based interactive drive software and hardware package designed to enhance productivity by allowing you to efficiently program, monitor and troubleshoot multiple drives from a remote location
- WDS bridges the gap between your facility's IMPULSE, OmniPulse™, or MagnePulse™ drives and Ethernet network
- Advanced diagnostics provide critical information to keep your system up and running. Users can:
  - Monitor parameters and status of multiple drives
  - Modify and upload/download drive parameters
  - Reset faults remotely
  - Log fault, alarm and run events with DataLogger function
  - Graph, print and e-mail items such as motor speed, torque, current etc.
- Troubleshoot from a remote location (office, plant floor, or another location) anytime, day or night, 24/7, eliminating the need to climb up on the crane to diagnose and reset a fault
- Includes the Drive Trending Tool and all of the features found in IMPULSE®•Link 4.1 Basic

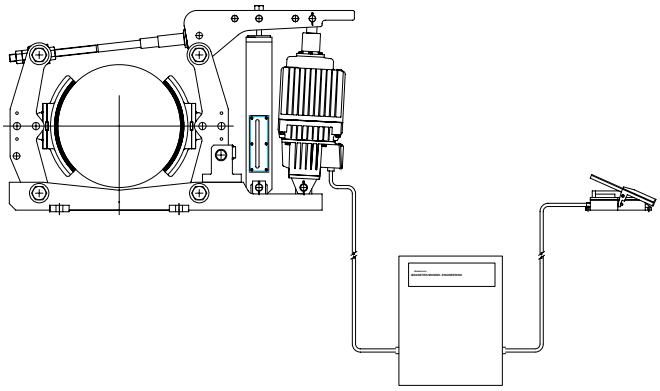
DATALOGGER SERIES 4 DRIVE SUPPORT TOOL

- Compact and user friendly, the DataLogger Series 4 plugs into the keypad pocket of IMPULSE®•G+ and VG+ Series 4 drives or connects by cable to Series 3 or G+ Mini drives
- System provides four components, including the DataLogger, USB Cable for PC communication, IMPULSE®•Link 5 Viewer PC Software, and Serial Cable for DataLogger Drive Connection
- Powered by IMPULSE drive's internal power supply when logging or by USB when connected to a PC

Features and Benefits

- Remote mount kits available for drive monitoring from outside the control enclosure for arc flash avoidance
- Includes 11 parameter sets that can be uploaded, stored, and downloaded into drives of the same model, control method, firmware version, and motion
- New drive trending feature makes troubleshooting faults and alarms simple by allowing users to see how drive monitors interact at the same time
- Retains the functionality of a drive keypad so users can configure drives without switching between the two devices to log or modify parameters

FOOTBRAKE/STATIC STEPLESS SIMULATION CUSTOM SOFTWARE



Features and Benefits

- Designed for IMPULSE®•VG+ Series 4 drives used on traverse motions to provide an effective means to slow or stop the motion of the bridge or trolley
- Eliminates current spikes and excess mechanical torque/stress on the drive train, and allows quick but smooth starting or changing of direction
- Improved torque control ensures a smooth transition from coasting to slowing down and is non-destructive to the controls or the crane itself
- Improves diagnostics and troubleshooting of any fault and alarm conditions
- Reduces maintenance costs, with fewer moving parts that wear and require replacing, like contactor tips, brake pads, etc.
- Apply this software to new or existing cab controlled cranes, existing hydraulic brakes, footbrakes, Static stepless retrofits, and Braketronic® Controller

GRAB/BUCKET CONTROL CUSTOM SOFTWARE

Features and Benefits

- Used with IMPULSE®•VG+ Series 4 drives to control multi-line clamshell or grapple buckets that utilize a loading/closing hoist
- Controls the various motions of the bucket without the need for a PLC
- Features Bucket Position Indication, providing the operator with the open/close status of the bucket while dredging (underwater) or, if the bucket isn't visible, via analog output from the closing hoist and received by an analog meter or an MMI
- No communication (such as master/slave) is needed
- Grab/bucket control software can be used to:
  - Lower an open bucket
  - Close the bucket on a pile
  - Raise an open or closed bucket
  - Stop with a loaded bucket
  - Perform horizontal winch applications

CUSTOM SOFTWARE

DRIVE SYNCHRONIZATION CUSTOM SOFTWARE

Features and Benefits

- Allows you to synchronize multiple IMPULSE®•VG+ Series 4 Drives
- The “slave" drives utilize an encoder option board with two encoder inputs, and monitors both its own encoder feedback AND the “master’s" encoder feedback, while also sending timing status information back to the master
- The slave drive compensates for any position errors by adjusting its motor speed, resulting in near-perfect alignment between the master and slave motor shafts
- The slave drive possesses the ability to automatically re-synchronize the motors, and has an electronic gearing feature
- While both drives are running, there is no accumulation of position error, so alignment is always maintained
- Offers increased safety by precisely controlling motion and preventing the operator from making an uneven lift
- Saves time and money by eliminating the need for a PLC
- Increases productivity because the operator does not need to level the hoists manually

SWAY CONTROL SYSTEM (SCS®) SERIES 2 CUSTOM SOFTWARE

Features and Benefits

- SCS2 can be embedded in our IMPULSE®•G+ Series 4 variable frequency drives for new or existing crane control systems without the need for external programmable logic controllers or costly height measurement devices
- Improves productivity by allowing the crane operator to concentrate on load engagement/disengagement rather than focusing on minimizing load swing
- Reduces material damage caused by incidental contact of swinging loads
- Enhances safety in operations and reduces the potential for personnel injuries and damage to equipment
- Reduces maintenance costs and downtime by decreasing stresses on structural, mechanical, and control components
- SCS2 is available as a retrofit for earlier IMPULSE drives or any brand of existing bridge or trolley variable speed drive

BLACK MAX® MOTORS

Features and Benefits

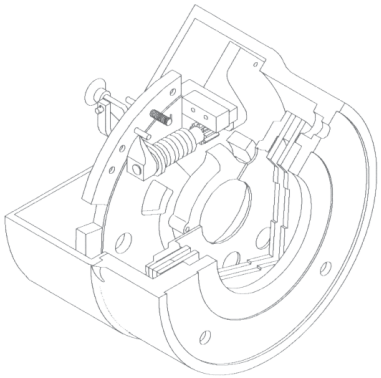
- Economical model designed to meet the needs of more common crane applications
- Capable of a 1000:1 speed range
- ½ to 50 HP
- Suitable for CMAA Class A through E
  - ½ to 30 HP Cont. duty
  - ½ to 50 HP 60 Min. duty
- NEMA Design A, optimized for operation with IGBT inverters
- Black Max motors have shorter lead delivery time and can be configured by the factory to add brakes or encoders
- Optional brakes and encoders
- Two year warranty

BLUE MAX® MOTORS

Features and Benefits

- Ideal for use in applications where precise motor control is needed
- Capable of 1000:1 speed range when used with IMPULSE®•VG+ Series 3 control
- 1 to 400 HP
- High horsepower version in a 5000 series frame available, capable of up to 1000 HP
- Suitable for CMAA Class A through F
- NEMA design A, optimized for operation with IGBT inverters
- Available options include encoders, NEMA C-Face mounting, Class H insulation, space heaters, explosion proof, severe duty treatment, doubleshaft/tapershaft, brakes, and inpro seals
- Blue Max motors are engineered and manufactured to customer specifications. Lead times vary depending on specifications
- Two year warranty

MOTOR BRAKE ENCODERS



Features and Benefits

- Rugged zero speed, magneto-resistive sensing technology
- Operating range -40° to 80°C
- 1024 PPR (pulses per revolution)
- Modular, non-contact, bearing-less design optimized for AC vector motor applications
- Unaffected by oil, grease, salt water, dust, or other common contaminants

SBI PENDANT PUSHBUTTON STATION

- Lightweight, ergonomic design allows the SBI Pendant to deliver optimum control and performance with less effort and fatigue than traditional pendants
- Available in 2-12 button configurations, momentary or maintained on/off, and with a variety of options and accessories

Features and Benefits

- Slim line pendant provides optimum control and performance, resting comfortably in the palm of your hand and most weighing less than two pounds
- External strain relief hardware and an internal cable grip to relieve tension on individual conductors and allow the pendant to be serviced while hanging on the pendant cable
- Tapered round cable entry gland provides a water tight seal, while a slide-on rubber boot provides added water protection
- Double insulation eliminates necessary internal grounding and metal parts that may otherwise stick out from inside the enclosure
- Switches are designed with visible contacts to ease wiring and are rated for 3 Amps and 250 Volts AC

Indoor/Outdoor Round Pendant Control Cable

- 600V, 250 Vdc
- Jacket Rating -40°C (-40°F) to 105°C (221°F)
- Resistant to UV, ozone, water, oil, and weather

SBP2® PENDANT PUSHBUTTON STATIONS

Features and Benefits

- Lightweight, ergonomic design rests comfortably in the palm of your hand
- Provides optimum control and performance with less effort and fatigue than traditional pendants
- High-impact resistant, watertight enclosure designed to survive even the most brutal environments
- SBP2 housing more chemically resistant than SBP housing
- Housing designed for ease of wiring
- Tandem design available for malfunction/ automation applications
- Most standard SBP2 pendants can be shipped the same day you order
- Easily customizable with a variety of accessories
- Switches are rated 3 Amp, 250 Vac and 2 Amp, 24 Vdc
- NEMA Rating - 1, 3, 4, 4X, and 12
- 10% lower cost than SBP
- 2, 4, 6, 8, 10, or 12 button configurations
- 1, 2, or 3 speed operations
- UL/cUL/CSA Listed

SBP® PENDANT PUSHBUTTON STATIONS

Features and Benefits

- Lightweight, ergonomic design rests comfortably in the palm of your hand
- Provides optimum control and performance with less effort and fatigue than traditional pendants
- NEMA Rating - 1, 2, 4, 4X, and 12
- 2, 4, 6, 8, 10, or 12 button configurations
- UL Listed

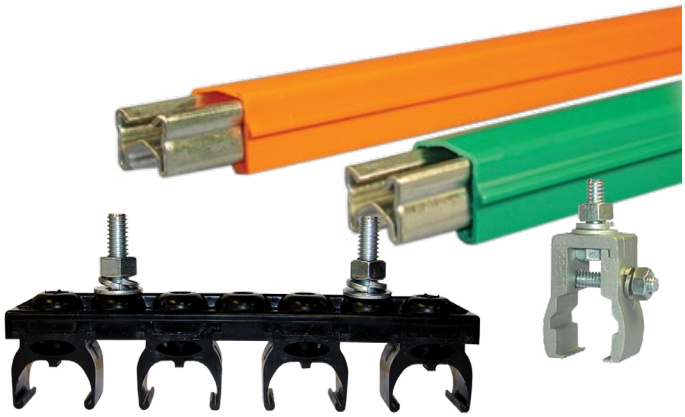
POWER DELIVERY SYSTEMS

ELECTROBAR® 8-BAR CONDUCTOR BAR SYSTEM

- Practical, proven, and economical way to deliver electricity to overhead cranes, hoists, monorails, and other types of moving equipment
- Traditional figure 8 design allows you to use it interchangeably with common bottom-entry 8-bar systems
- Single and tandem collector assemblies available for smooth, continuous contact along straight runways or curved applications
- Vertical or horizontal mounting configurations
- 70% duty cycle (84 seconds on and 36 seconds off)
- 90, 110, and 350 Amp bar ratings

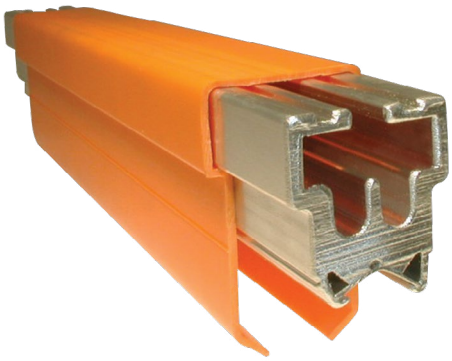
ELECTROBAR® FS CONDUCTOR BAR SYSTEM

- Designed for the electrification of cranes, monorails, and automated storage and retrieval systems
- Contoured bar design ensures electrical contact between the collector shoe and conductor bar and minimizes deflection between hangers
- Finger-safe design minimizes potential shock hazard
- Modular, snap-in multi-pole conductor bar hangers and 15' standard lengths minimize installation time
- Systems up to 490 feet in length can be installed without expansion assemblies
- Vertical and horizontal mounting
- 90, 110, 250, and 400 Amp bar ratings



ELECTROBAR® HX SERIES ENCLOSED CONDUCTOR BAR SYSTEM

- Provides high amperage power delivery for heavy duty applications
- Aluminum alloy extruded line elements with stainless-steel lined contact surface provide better performance and increase durability.
- Accommodates 600 Vac and 250 Vdc applications
- Designed for crane speeds for up to 1500 FPM
- Rated for use in environments up to 160° F ambient temperature
- 400, 700, and 1000 Amp bar ratings

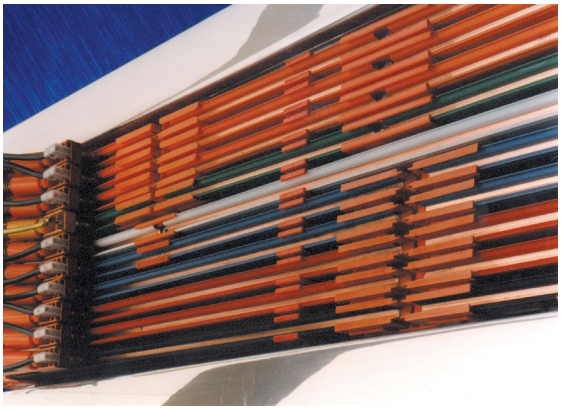


ELECTROBAR ELITE® ENCLOSED CONDUCTOR BAR SYSTEM

Features and Benefits

- Our most advanced and versatile conductor bar system
- Compact lightweight enclosed design allows you to safely put the conductors in a small dimensional package compared to traditional 8-Bar
- Ideally suited for low headroom applications, preventing incidental contact with a power conductor bar
- Low friction makes it suitable for workstation bridge cranes
- Curved line elements available from 32" radius
- High speed collector assemblies allow for travel speeds exceeding 325 feet/minute
- High temperature line elements available for 55°C to 75°C ambient operating environments.
- Finger safe rating of IP23
- 20, 60, 100, 130, and 200 4-pole and 5-pole systems
- Higher cost easily offset by reduced labor expense to install
- Foolproof design only allows conductors and collectors to be positioned correctly

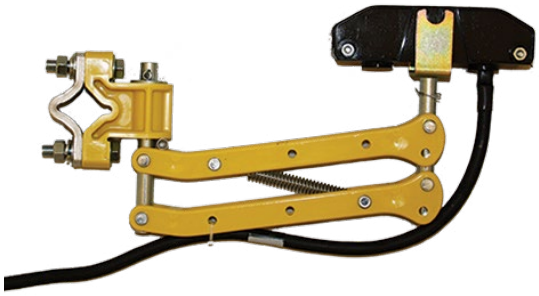
FABA® CONDUCTOR BAR



Features and Benefits

- Compact conductor bar for electrified monorail systems, workstations, automated systems, and more
- Provides flexibility-taking power up, down, under, over, around – wherever it's needed in virtually any direction
- Enclosed in impact-resistant, non-flammable PVC housing, which is chemically resistant against most volatile materials
- Reliable U-shaped bar ensures shoe contact
- Can be curved on each axis to match monorail curves at job site
- Multiple color covers for easy identification of power/control lines
- 100 Amp finger-safe copper conductors

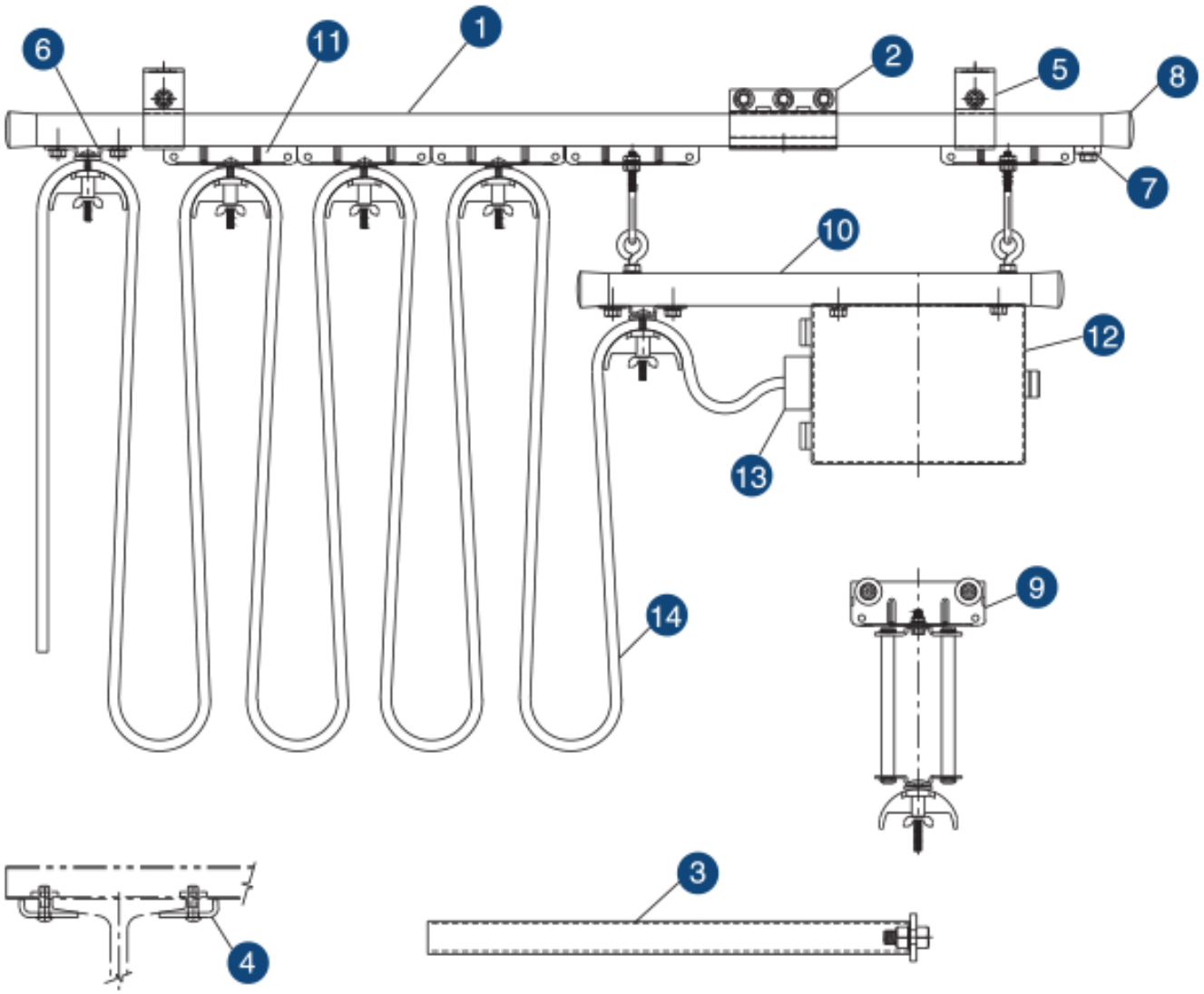
COLLECTOR ASSEMBLIES



Features and Benefits

- Offered in single or double shoe designs
- Contact shoes are mechanically supported by an insulating support assembly spring loaded by an arm and body mechanism
- Furnished with copper graphite contacts for movement up to 900 FPM
- Provides continuous current pick-up to 100 Amps per shoe, 400 Amps for HX

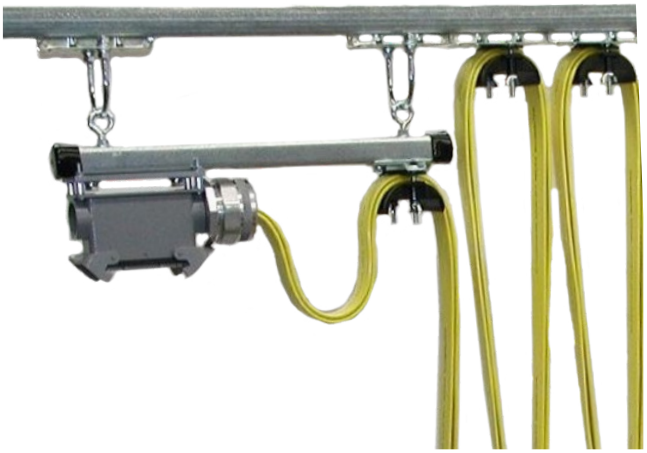
FESTOON SYSTEM DIAGRAM



1. Track Sections and Cross Arm Brackets
2. Joint Assembly
3. Tow Arm
4. Cross Arm Mounting Bracket
5. Hanger Assembly
   - Standard Profile
   - Low Profile
   - C-Hanger
6. End Cable Clamp
7. End Stop
8. End Cap
9. Tow Trolley
10. Control Box Trolley
11. Trolley
12. Junction Boxes/Terminal Strips
13. Cable Grips
14. Festoon Cable

C-TRACK FESTOON SYSTEMS

- Galvanized standard and heavy-duty C-Track – 10', 20' length
- Stainless steel standard duty C-Track – 10', 20' length
- Single and double flat cable trolley saddles – 150 lb. capacity each
- Single and double round cable trolley saddles – 150 lb. capacity each
- All trolleys are provided with ball bearing wheels
- 3" and 5" trolley frames
- Multiple C-Track hanger configurations
- Tow arm and trolley
- Control box trolley
- Available pre-wired Plug & Play



PLUG & PLAY FESTOON HARDWARE

Features and Benefits

- Reduces festoon installation time with numerous options available to meet application needs
- Available with rugged die cast aluminum housing with dual locked elements to ensure a secure connection
- Standard 16-Pin plug and receptacle is offered for applications from 16-60 Amps and wire sizes up to 14 AWG
- Plugs and receptacles are UL recognized and CSA approved

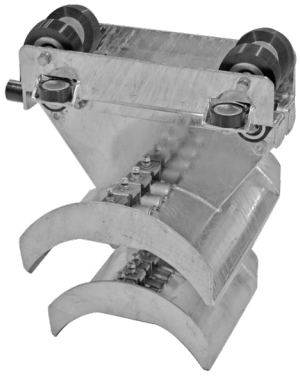
HEAVY-DUTY ALUMINUM FESTOON SYSTEMS

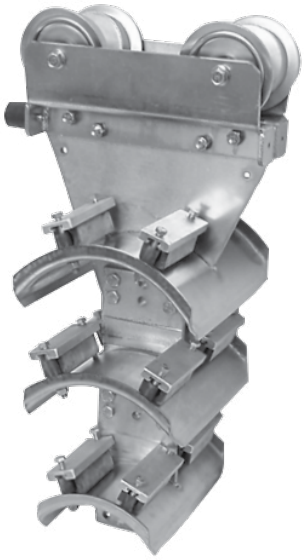
- Heavy-duty aluminum extruded track – 10', 20' length
- Track sections may be formed to a minimum 36" radius
- Single and double flat cable trolley saddles – 150 lb. capacity each
- Single and double round cable trolley saddles – 150 lb. capacity each
- Trolleys are equipped with ball bearing wheels capable of traveling at speeds of 250 feet per minute
- Each trolley can be supplied with anti-lift up rollers and is capable of supporting 150 lbs. of cable
- 3" and 5" trolley frames
- Tow arm and trolley
- Control box trolley
- Available pre-wired Plug & Play

HEAVY-DUTY I-BEAM FESTOON SYSTEMS

- Designed for festoon flat cables using a 3", 4", or 6" American Standard I-Beam as the trolley runway
- Single and double flat cable trolley saddles – 250 lb. capacity each
- Single and double round cable trolley saddles – 250 lb. capacity each
- I-Beam trolleys are available in multiple design configurations, are zinc-plated, and feature ball bearing, lifetime lubricated wheels
- Trolley bumpers
- Trolleys are also available in stainless steel construction
- Tow arm and two trolley
- Control box trolley
- Available pre-wired Plug & Play

MILL DUTY & MARINE TERMINAL I-BEAM FESTOON TROLLEYS





Features and Benefits

- Standard 4" diameter trolley wheel
- Capacity of flanged main wheel trolley
  - 800 lbs. @ 400 ft. /min.
  - 600 lbs. @ 600 ft. /min.
- Capacity of non-flanged trolley wheel (with side guide rollers)
  - 1,000 lbs. @ 400 ft. /min.
  - 800 lbs. @ 600 ft. /min.
- Polyurethane wheels – flangeless (with polyurethane side guide rollers)
- Side removable main wheels
- Anti-lift rollers
- Trolleys are manufactured from low carbon steel and are zinc plated with a gold dichromate finish
- Trolleys can also be manufactured from low carbon steel with a hot dipped galvanized finish
- Trolleys are also available in stainless steel construction
- Multi-tier saddle design
- Individual round clamps to secure round cables and hoses
- Bar clamps to secure both flat and round cables
- Cable tie organizers
- Bulk cable organizers
- Cable protectors (tow chains, tow cables, & shock cords)
- Shock absorbers
- Custom sizes available
- Available pre-wired

RADIOS – CRANE & HOIST

TELEMOTIVE *tele*PENDANT™ TRANSMITTER

- Available in up to three motions with six auxiliary functions or five motions with four auxiliary functions using A & B select
- Includes traditional pendant-style pushbutton station switches, rating for a million plus operations, and two and three-speed designs

Features and Benefits

- Rugged and chemically resistant transmitter case has the ability to withstand shock and harsh environments
- Stores four complete system configurations, eliminating the cost and hassle of tracking and maintaining a fleet of spare transmitters
- One of the longest lasting batteries in the industry is designed to minimize power consumption
- 4-in-1 transmitter design supports multiple cranes via a password protected access code

Frequencies

- Part 15 License Free: 430-440MHz

Battery Type

- Rechargeable: 3.7V Li-Ion
- Non-Rechargeable: "AA" Alkaline

Operating Range

- Up to 300 feet

TELEMOTIVE *tele*PILOT™ TRANSMITTER

- Available in three-motion, two-speed and three-auxiliary functions or three-motion, two-speed, one-auxiliary function, and A, A + B, or B
- Electronically synthesized frequency allows for 31 operating channels

Features

- Includes a durable, lightweight, extruded aluminum transmitter housing and sub-voltage technology providing a much longer operating life
- Designed to minimize power consumption, providing one of the longest life batteries in the industry
- Stores four complete system configurations, eliminating the cost and hassle of tracking and maintaining a fleet of spare transmitters
- 4-in-1 transmitter design supports multiple cranes via a password protected access code

Frequencies

- Part 15 License Free: 430-440MHz

Battery Type

- Rechargeable: 3.7V Li-Ion
- Non-Rechargeable: "AA" Alkaline

Operating Range

- Up to 300 feet

TELEMOTIVE FLEX VUE® TRANSMITTER

- Available with several options to meet the needs of a variety of applications and industries
- Choose between 4, 8, and 12 two-step or stepless button configurations with accurate and smooth operation

Features and Benefits

- Available two-way radio frequency for applications requiring feedback of machine parameters, alarms, and command confirmation
- Rugged, super tough nylon housing withstands shock, water, heat, and harsh environments
- High resolution color display keeps the operator informed of system status and diagnostics at all times, including battery life, signal strength, and warning symbols
- Two-step pushbuttons feature gold-plated contacts and are rated for more than one million press cycles. The defined snap-action steps provide positive tactile feedback even while wearing gloves
- Stepless pushbuttons provide adjustable speed control with four mode settings (25, 50, 75, and 100% output) and precise control of machine movement

Frequencies

- Part 15 License Free: 430-439.8MHz, 902-928 MHz, 2.4-2.5GHz

Battery Type

- Non-Rechargeable: "AA" Alkaline

Operation Range

- 300-2,000 feet

CE

RADIOS – CRANE & HOIST

ENRANGE™ FLEX EX TRANSMITTER

- Available with several options to meet the needs of a variety of applications and industries
- Choose between 4, 6, 8, and 12 button style options to with accurate and smooth operation

Features and Benefits

- Advanced synthesized RF controls with 62 user-programmable channels add flexibility to frequency management in the field
- Durable enclosures are made from industrial-strength nylon and fiberglass composite materials
- Advanced microprocessor controls with 32-bit CRC and Hamming Code provide ultra-fast, safe, precise, and error-free encoding and decoding
- Pushbuttons feature gold-plated contacts and are rated for more than one million press cycles

Frequencies

- Part 15 License Free: 433-434MHz

Battery Type

- Rechargeable: "AAA" NiMH
- Non-Rechargeable: "AA" Alkaline

Operating Range

- Up to 300 feet

CE

FLEX PRO™ TRANSMITTER

- Available with several options to meet the needs of a variety of applications and industries
- Choose between 8 or 12 proportional button configurations with precise control for smooth operation

Features and Benefits

- Lightweight, ergonomically designed contoured case with available rubber jacket makes operations comfortable for the user
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Adjustable speed control with four mode settings (25%, 50%, 75%, and 100% output) provides precise control of machine movement
- Buttons can be configured as proportional, on/off, or a combination of both and include a variety of standard labels

Frequencies

- Part 15 License Free: 433-434.75MHz

Battery Type

- Rechargeable: "AAA" NiMH
- Non Rechargeable: "AA" Alkaline

Operating Range

- Up to 300 feet

CE

ENRANGE™ 300T TRANSMITTER

- Available with several options to meet the needs of a variety of applications and industries
- A cost-effective, high performance package provides remote crane controls with easy operations and maintenance

Features and Benefits

- Fully proportional/programmable versions are available for stepless 3-5 speed applications
- Large buttons make this unit popular for applications that require the operators to wear gloves
- Each motion can be configured as one or two steps, providing typical interfacing to contactors or drives
- Rugged, super-tough housing is made to withstand shock and NEMA 4 (IP65) sealing can easily endure harsh, industrial environments

Frequencies

- Part 15 License Free: 430-440MHz, 902-928MHz

Battery Type

- Non-Rechargeable: "AAA" Alkaline

Operating Range

- Up to 300 feet

TELEMOTIVE XLTX TRANSMITTER

- Available with several options to meet the needs of a variety of applications and industries
- Graphic display with system diagnostics including battery life, signal strength, and warning symbols

Features and Benefits

- Rugged, super-tough nylon housing is made to withstand shock and NEMA 4 (IP66) sealing can easily endure harsh, industrial environments
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- New detented/stepped joysticks with a variety of handle shapes to choose from allow the user to identify by feel
- Optional Radio Control Programmer (RCP) allows settings to be programmed from a Windows PC

Frequencies

- Part 15 License Free: 430-440MHz, 902-928MHz, 2.4GHz
- Part 90 Licensed (VHF): 72-76MHz
- Part 90 Licensed (UHF): 450-470MHz

Battery Type

- Rechargeable: 4.8V NiMH
- Non-Rechargeable: "AA" Alkaline

Operating Range

- 300-2,000 feet

CE

RADIOS – CRANE & HOIST

TELEMOTIVE MLTX2™ TRANSMITTER

- Available with several customizable options to provide the ideal solution for a variety of applications and industries
- Offers plug-and-play control packages designed specifically for your material handling equipment, manufactured and tested on our panel assembly line

Features and Benefits

- Rugged, super-tough nylon housing is made to withstand shock and NEMA 4 (IP66) sealing can easily endure harsh, industrial environments
- Graphic display with system diagnostics including battery life, signal strength, and warning symbols
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Easy-to-use, angled levers and an ergonomically designed contoured case enhance operator comfort

Frequencies

- Part 15 License Free: 430-440MHz, 902-928MHz, 2.4GHz
- Part 90 Licensed (VHF): 72-76MHz
- Part 90 Licensed (UHF): 450-470MHz

Battery Type

- Rechargeable: 4.8V NiMH
- Non-Rechargeable: "AA" Alkaline

Operating Range

- 300-2,000 feet

CE

TELEMOTIVE MBT TRANSMITTER

- Incorporates the latest electronic technology to meet the needs of a variety of applications and industries
- Offers control capability similar to larger bellybox transmitters, including proportional thumbsticks, toggle switches, potentiometers, graphic display, two-way feedback, and FHSS RF

Features and Benefits

- Optional Radio Control Programmer (RCP) connects via USB, allowing users to program settings from your Windows PC
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Convenient metal belt clip secures to a user's waist, or use Magnetek's deluxe padded strap to carry over your shoulder
- Rugged, super-tough nylon housing is made to withstand shock, and NEMA 4 (IP66) sealing can easily endure harsh, industrial environments

Frequencies

- Part 15 License Free: 430-440MHz, 902-928MHz, 2.4GHz

Battery Type

- Rechargeable: 4.8V NiMH
- Non-Rechargeable: "AA" Alkaline

Operating Range

- 300-2,000 feet

TELEMOTIVE MLTX™ TRANSMITTER

- Available with many customizable options to meet the needs of a variety of applications and industries
- Lightweight, ergonomically designed contoured case incorporates the latest polymer technology

Features and Benefits

- Rugged, super-tough nylon housing is made to withstand shock and NEMA 4 (IP66) sealing can easily endure harsh, industrial environments
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Easy-to-use, angled lever or joystick controls enhance operator comfort
- Dual access code system provides peace-of-mind because the signal only operates the intended equipment
- Optional certification for use in hazardous locations requiring ISA 12.12.01 Class I and Class II, Division 2, Group A, B, C, D, E, F and G

Frequencies

- Part 15 License Free: 430-439.8MHz
- Part 90 Licensed (VHF): 72-76MHz
- Part 90 Licensed (UHF): 450-470MHz

Battery Type

- Rechargeable: 7.2V NiMH, 12V NiMH
- Non-Rechargeable: 9V Alkaline

Operating Range

- 300-1,000 feet

TELEMOTIVE SLTX™ TRANSMITTER

- Heavy-duty, super-tough housing is ideal for withstanding harsh environments such as steel mills and heavy manufacturing plants
- Available with many customizable options to meet the needs of a variety of applications and industries

Features and Benefits

- Lightweight controls have surface mount technology and synthesized modules to enhance flexibility in the field
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Proven heavy-duty lever switch style is available with or without detents
- High-quality, smaller, more durable circuit boards mean enhanced reliability

Frequencies

- Part 15 License Free: 430-439.8MHz
- Part 90 Licensed (VHF): 72-76MHz
- Part 90 Licensed (UHF): 450-470MHz

Battery Type

- Rechargeable: 7.2V NiMH, 12V NiMH
- Non-Rechargeable: 9V Alkaline

Operating Range

- 300-1,000 feet

RADIOS – CRANE & HOIST

TELEMOTIVE PENDANT–STYLE TRANSMITTER

- The Pendant-Style series offers a wide selection of industrial grade transmitters to meet your application in the most economical fashion
- Available in three or five motions with A, A+B, or B selector providing you with flexibility
- Pendant-Style transmitter can control the heaviest crane to the lightest hoist or monorail system

Features and Benefits

- Designed to minimize power consumption, providing one of the longest life batteries in the industry. Available with rechargeable NiCAD or disposable alkaline battery
- Choose from one, two, or three-speed pushbuttons for variable frequency driven equipment
- Pendant-Style systems can be customized for your special applications. When paired with one of our modular receivers, engineered or pre-engineered, the result is a solid, tough control system

Battery Type

- Rechargeable: BT111-1 (Li-Ion)
- Non-Rechargeable: Alkaline

RAILYARD REMOTE CONTROL SYSTEMS

- Systems allow one operator, working from a safe distance with a clear view, to control locomotive equipment
- Radio receiver and electric and pneumatic interface are all in one cabinet
- Total modular design incorporates onboard diagnostic circuitry that allows rapid identification and correction of problems, simplifying maintenance and minimizing the need for multiple work crews
- Both transmitter and receiver have on-board microprocessor technology for maximum reliability and performance

Features and Benefits

- Self-check pneumatic program ensures the unit tests itself every time it starts and verifies at all times the proper air pressure is measured for safe operations
- Brake functions include independent braking, train braking, automatic braking, independent brake bail, drag brake, and throttle against train brake
- Integrated pneumatics with quadruple-filtered air supply reduces the risk of contamination of control hardware for extreme reliability
- Tilt switch safety feature shuts down the system and sets brakes on the locomotive if users become disabled

ENRANGE FLEX VUE® TRANSMITTER

- Available with several options to meet the needs of a variety of applications and industries
- Choose between 4, 8, and 12 two-step or proportional button configurations with accurate and smooth operation

Features and Benefits

- Available two-way RF for applications requiring feedback of machine parameters, alarms, and command confirmation
- Rugged, super tough nylon housing withstands shock, water, heat, and harsh environments
- High resolution color display keeps the operator informed of system status and diagnostics at all times, including battery life, signal strength, and warning symbols
- Proportional pushbuttons provide adjustable speed control with four mode settings (25, 50, 75, and 100% output) and precise control of machine movement

Frequencies

- Part 15 License Free: 430-439.8MHz, 902-928MHz, 2.4-2.5GHz

Battery Type

- Non-Rechargeable: "AA" Alkaline

Operation Range

- 300-2,000 feet

ENRANGE FLEX PRO™ TRANSMITTER

- Available with several options, features, and specifications to meet the needs of a variety of applications and industries
- Can be configured as proportional, on/off, or a combination of both and include a variety of standard labels

Features and Benefits

- Lightweight, ergonomically designed contoured case with available rubber jacket makes operations comfortable for the user
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Adjustable speed control with four mode settings (25%, 50%, 75%, and 100% output) provides precise control of machine movement
- Buttons can be configured as proportional, on/off, or a combination of both and include a variety of standard labels

Frequencies

- Part 15 License Free: 433-434.75MHz

Battery Type

- Rechargeable: "AAA" NiMH
- Non-Rechargeable: "AA" Alkaline

Operation Range

- Up to 300 feet

RADIOS – MOBILE HYDRAULIC

ENRANGE FLEX PRO™ TETHERED CAN-BUS CONROLLER

- Incorporates the latest in proportional control technology in a lightweight, comfortably contoured, yet durable case
- Provides "one-handed" operation, useful for applications that require operators to assist in control of the machine

Features and Benefits

- Choose 8 or 12 proportional button configurations with precise control for smooth operation
- Adjustable speed control –four mode settings (25%, 50%, 75%, and 100% output) provide precise control of machine movement
- Rugged, tough nylon housing is made to withstand shock. Protective cases and accessories are available for harsh environments
- Ideal for situations when RF cannot bet used because of RF jamming restrictions, or when proportional control is needed, but RF is not required

CE

ENRANGE™ FLEX EM TRANSMITTER

- Available with several customizable options to meet the needs of a variety of applications and industries
- Choose from 4, 8, or 12 button options with single step control

Features and Benefits

- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Ergonomically designed contoured case makes operations more comfortable for the user
- Rugged, tough nylon housing is made to withstand shock. Protective cases and accessories are available for harsh environment applications
- The revolutionary I-CHIP module makes this a universal transmitter that can be programmed in the field

Frequencies

- Part 15 License Free: 433-434MHz

Battery Type

- Rechargeable: "AAA" NiMH
- Non-Rechargeable: "AA" Alkaline

Operation Range

- Up to 300 feet

CE

ENRANGE™ XLTX TRANSMITTER

- Available with several options to meet the needs of a variety of applications and industries
- Graphic display with system diagnostics including battery life, signal strength, and warning symbols

Features and Benefits

- Incorporates the latest electronic technology in a lightweight, comfortably contoured, durable case
- Rugged, super-tough nylon housing is made to withstand shock and NEMA 4 (IP66) sealing can easily endure harsh, industrial environments
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Up to eight levers, four joysticks, or any combination available, as well as arrangements of toggles, selector switches, and potentiometers

Frequencies

- Part 15 License Free: 430-440MHz, 902-928MHz, 2.4GHz

Battery Type

- Rechargeable: 4.8V NiMH
- Non-Rechargeable: "AA" Alkaline

Operation Range

- 300-2,000 feet

CE

ENRANGE™ MLTX2 TRANSMITTER

- Available with several customizable options to meet the needs of a variety of applications and industries
- Dual access code system provides peace-of-mind, as the signal only operates the intended equipment

Features and Benefits

- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Optional graphic display keeps the operator informed of system status at all times, and makes configuring access codes, channels, and other system settings simple
- Ergonomically designed contoured case makes operations more comfortable for the user
- Available two-way feedback shows machine related parameters, engine diagnostic information, Received Signal Strength Indication (RSSI), and much more

Frequencies

- Part 15 License Free: 430-440MHz, 902-928MHz, 2.4GHz

Battery Type

- Rechargeable: 4.8V NiMH
- Non-Rechargeable: "AA" Alkaline

Operation Range

- 300-2,000 feet

CE

RADIOS – MOBILE HYDRAULIC

ENRANGE™ MLTX TRANSMITTER

- Available with many customizable options to meet the needs of a variety of applications and industries
- Dual access code system provides peace-of-mind because the signal only operates the intended equipment

Features and Benefits

- Lightweight, ergonomically designed contoured case incorporates the latest polymer technology
- Rugged, super-tough nylon housing is made to withstand shock and NEMA 4 (IP66) sealing can easily endure harsh, industrial environments
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Easy-to-use, angled lever or joystick controls enhance operator comfort
- Optional certification for use in hazardous locations requiring ISA 12.12.01 Class I and Class II, Division 2, Group A, B, C, D, E, F and G

Frequencies

- 430-439.8MHz

Battery Type

- Rechargeable: 7.2V NiMH, 12V NiMH
- Non-Rechargeable: 9V Alkaline

Operation Range

- 300-500 feet

ENRANGE™ CHTX TRANSMITTER

- Available with several customizable options to meet the needs of a variety of applications and industries
- Offers plug-and-play control packages designed specifically for your equipment, manufactured and tested on our panel assembly line

Features and Benefits

- Easy-to-use, large control area provides space for a variety of fighter pilot and larger machine-type joysticks, toggle switches, key switches, and selector switches
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery is available
- Rugged, super-tough nylon housing is made to withstand shock and NEMA 4 (IP65) sealing can easily endure harsh, industrial environments
- Offered a cost-effective alternative to hardwired pedestal-mount transmitters and attaches to a heavy-duty chest plate for carrying ease

Frequencies

- Part 15 License Free: 430-439.8MHz, 902-928MHz, 2.4-2.5GHz

Battery Type

- Rechargeable: 4.8V NiMH
- Non-Rechargeable: "AA" Alkaline

Operation Range

- 300-1,500 feet

ENRANGE™ MBT TRANSMITTER

- Incorporates the latest electronic technology to meet the needs of a variety of applications and industries
- Offers control capability similar to larger bellybox transmitters, including proportional thumbsticks, toggle switches, potentiometers, graphic display, two-way feedback, and FHSS RF

Features and Benefits

- Optional Radio Control Programmer (RCP) connects via USB, allowing you to program settings from your Windows PC
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Convenient metal belt clip secures to your waist, or use Magnetek's deluxe padded strap to carry over your shoulder
- Rugged, super-tough nylon housing is made to withstand shock and NEMA 4 (IP66) sealing can easily endure harsh, industrial environments

Frequencies

- Part 15 License Free: 430-440MHz, 902-928MHz, 2.4GHz

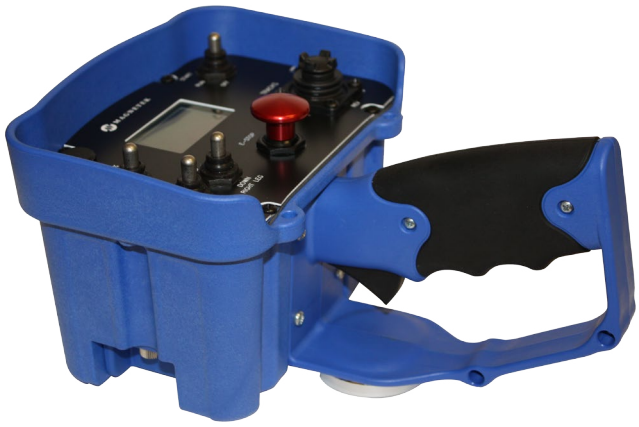
Battery Type

- Rechargeable: 4.8V NiMH
- Non-Rechargeable: "AA" Alkaline

Operation Range

- 300-2,000 feet

ENRANGE™ PGT TRANSMITTER



- Incorporates the latest electronic technology to meet the needs of a variety of applications and industries
- Offers plug-and-play control packages designed specifically for your equipment, manufactured and tested on our panel assembly line

Features and Benefits

- Single proportional trigger version is an extremely economical option for controlling multiple proportional hydraulic valves
- Ergonomically designed contoured grip with rubber over moldings make it comfortable for the user
- One of the longest lasting batteries in the industry is designed to minimize power consumption. A rechargeable NiMH battery pack is available
- Rugged, super-tough nylon housing is made to withstand shock and NEMA 4 (IP66) sealing can easily endure harsh, industrial environments

Frequencies

- Part 15 License Free: 430-440MHz, 902-928MHz, 2.4GHz

Battery Type

- Rechargeable: 4.8V NiMH
- Non-Rechargeable: "AA" Alkaline

Operation Range

- 300-2,000 feet

ENRANGE™ MHR RADIO CONTROLLER

- Combines components of a radio receiver and hydraulic controller into a convenient single unit
- Includes an informative LCD graphic display for viewing system settings and machine functions

Features and Benefits

- Rugged, waterproof design is resistant to shock and vibration, making it ideal for outdoor use and harsh environments
- User interface features fully sealed pushbuttons for menu navigation and modifying system settings in the field
- Two-way feedback provides precise information about equipment performance
- Optional Radio Control Programmer (RCP) allows settings to be programmed from a Windows PC

Frequencies

- Part 15 License Free: 430-440MHz, 2.4-2.5GHz

Operation Range

- Up to 2,000 feet

CE

ENRANGE™ FLEX M RECEIVER

OUTPUTS	Up to 64 relays, up to 32 0-10 Vdc analog	
INPUTS	Up to 64 digital, up to 32 0-10 Vdc analog	
COMMUNICATION	1 CAN-bus, 1 RS-232, 1 RS-485/RS-422	
FREQUENCIES	Part 15 License Free	430-440MHz, 902-928MHz, 2.4-2.5GHz
	Part 90 Licensed Two-way	450-470MHz Available upon request
OPERATING RANGE	Up to 3000 feet	
DIAGNOSTICS	On-board diagnostics with LED indicators for receiver status	
INPUT VOLTAGE	100-230 Vac, 9-36 Vdc	
COMPATIBLE WITH	XLTX, MLTX, SLTX, MBT, PGT, 300T, *tele*Pendant, *tele*Pilot, Flex EX, Flex Pro	

ENRANGE™ FLEX 4/6 EX RECEIVER

OUTPUTS	8 motion relays, 1 MLC relay, 1 horn relay	
INPUTS	NA	
COMMUNICATION	NA	
FREQUENCIES	Part 15 License Free Part 90 Licensed Two-way	433-440MHz NA NA
OPERATING RANGE	Up to 300 feet	
DIAGNOSTICS	On-board diagnostics with LED indicators for receiver status	
INPUT VOLTAGE	105-480 Vac, 9-36 Vdc	
COMPATIBLE WITH	Flex EX	

CE

ENRANGE™ FLEX 8/12 EX RECEIVER

OUTPUTS	Up to 24 motion relays, 1 MLC relay, 1 horn relay	
INPUTS	NA	
COMMUNICATION	NA	
FREQUENCIES	Part 15 License Free Part 90 Licensed Two-way	433-440MHz NA NA
OPERATING RANGE	Up to 3000 feet	
DIAGNOSTICS	On-board diagnostics with LED indicators for receiver status	
INPUT VOLTAGE	105-480 Vac, 9-36 Vdc	
COMPATIBLE WITH	Flex EX	

CE

RECEIVERS

ENRANGE WIC-2402™ WIRELESS CAN MODULE

OUTPUTS	4 digital on/off	
INPUTS	NA	
COMMUNICATION	1 CAN-bus	
FREQUENCIES	Part 15 License Free Part 90 Licensed Two-way	2.4-2.5GHz NA NA
OPERATING RANGE	Up to 2000 feet	
DIAGNOSTICS	On-board diagnostics with LED indicators for receiver status	
INPUT VOLTAGE	12-24 Vdc nominal (6-36 Vdc max)	

CE

ENRANGE™ CAN-2 RECEIVER

OUTPUTS	2 digital Used for machine stop	
COMMUNICATION	1 CAN-BUS	
FREQUENCIES	Part 15 License Free Part 90 Licensed	430-439.8MHz, 2.4-2.5GHz NA
OPERATING RANGE	Up to 2,000 feet	
DIAGNOSTICS	LED diagnostics or back to controller display	
INPUT VOLTAGE	12-24 Vdc nominal (6-36 Vdc max)	
COMPATIBLE WITH	XLTX, MLTX2, Flex VUE, Flex EM, Flex Pro	

Optional Radio Control Programmer (RCP) allows settings to be programmed from a Windows PC.

CE

ENRANGE™ CAN-6 RECEIVER

OUTPUTS	8 digital on/off and 8 0-10 Vdc analog	
INPUTS	NA	
COMMUNICATION	1 CAN-bus	
FREQUENCIES	Part 15 License Free	430-440MHz, 902-928MHz
	Part 90 Licensed	NA
	Two-way	Available upon request
OPERATING RANGE	Up to 300 feet	
DIAGNOSTICS	On-board diagnostics with LED indicators for receiver status	
INPUT VOLTAGE	9-36 Vdc	
COMPATIBLE WITH	XLTX, MLTX, MBT, PGT, Flex EX, Flex Pro	

ENRANGE™ CAN-R1 RECEIVER

OUTPUTS	4 digital on/off	
INPUTS	4 analog or digital	
COMMUNICATION	1 CAN-bus	
FREQUENCIES	Part 15 License Free	2.4-2.5GHz
	Part 90 Licensed	NA
	Two-way	Available upon request
OPERATING RANGE	Up to 2000 feet	
DIAGNOSTICS	On-board diagnostics with LED indicators for receiver status	
INPUT VOLTAGE	9-36 Vdc	
COMPATIBLE WITH	XLTX, MBT, PGT	

ENRANGE™ CAN-R2 RECEIVER

OUTPUTS	NA	
INPUTS	4 analog and 4 digital	
COMMUNICATION	1 CAN-bus	
FREQUENCIES	Part 15 License Free	2.4-2.5GHz
	Part 90 Licensed	NA
	Two-way	Available upon request
OPERATING RANGE	Up to 2000 feet	
DIAGNOSTICS	On-board diagnostics with LED indicators for receiver status	
INPUT VOLTAGE	9-36 Vdc	
COMPATIBLE WITH	XLTX, MBT, PGT	

RECEIVERS

CAN-M1 EXPANSION MODULE

OUTPUTS	8 Solid state digital outputs 2.5A @ 12/24 Vdc 8 Analog 0-10 Vdc, 0-5 Vdc outputs
COMMUNICATION	1 CAN-bus
SUPPORTED PROTOCOLS	SAE J1939, Generic CAN, Parker ICP, CAN-Open
COMPATIBLE WITH	XLTX, MLTX, MBT, PGT, Flex EX, Flex Pro

PHOTO COMING SOON

CAN-M2 EXPANSION MODULE

OUTPUTS	4 digital 12/24 Vdc inputs 4 digital or analog 12/24 Vdc inputs
COMMUNICATION	1 CAN-bus
SUPPORTED PROTOCOLS	SAE J1939, Generic CAN, Parker ICP, CAN-Open
COMPATIBLE WITH	XLTX, MLTX, MBT, PGT, Flex EX, Flex Pro

PHOTO COMING SOON

ENRANGE™ 30R RECEIVER

OUTPUTS	13 mechanical relays rated at 8A @120 Vac	
INPUTS	NA	
COMMUNICATION	NA	
FREQUENCIES	Part 15 License Free Part 90 Licensed Two-way	902-928MHz NA NA
OPERATING RANGE	Up to 350 feet	
DIAGNOSTICS	LED lights for visual feedback	
INPUT VOLTAGE	24-48 Vdc	
COMPATIBLE WITH	XLTX, MLTX2, Flex VUE, Flex EX	

DANFOSS PLUS+1™ OX024-010 EXPANSION MODULE

OUTPUTS	10 PVGOUT Typically output as 25%, 50%, or 75% Able to output 0-100% Used as reference when driving PVGOUT outputs
COMMUNICATION	1 CAN-bus
INPUT VOLTAGE	9-36 Vdc
COMPATIBLE WITH	CAN-2, MHR

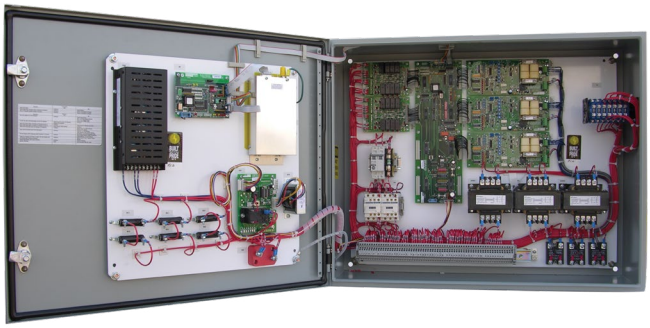
RADIO CONTROL PROGRAMMER OPTION (RCP)

Features and Benefits

- User-friendly, interactive Radio Control Programmer software allows you to program systems settings from your Windows PC
- Enables creation and saving of system configurations for future use and transferable configurations among multiple radio control products
- RCP packages include a USB Drive, activation code, USB cable, and User's Guide
- Compatible with the following products:
  - Telemotive *tele*Pendant™ Transmitter
  - Telemotive *tele*Pilot™ Transmitter
  - Telemotive/Enrange™ XLTX Transmitter
  - Telemotive/Enrange™ MLTX2 Transmitter
  - Telemotive/Enrange™ MBT Transmitter
  - Telemotive/Enrange™ Flex VUE® Transmitter
  - Enrange™ PGT Transmitter
  - Enrange™ CHTX Transmitter
  - Enrange™ MHR Radio Controller
  - Enrange™ CAN-2 Receiver
  - Telemotive in*tele*Smart Receiver
  - Telemotive in*tele*Smart2 Receiver

TELEMOTIVE IN*TELE*SMART RECEIVER

OUTPUTS	Up to 24 relays	
INPUTS	NA	
COMMUNICATION	NA	
FREQUENCIES	Part 15 License Free Part 90 Licensed Two-way	430-440MHz NA NA
OPERATING RANGE	Up to 300 feet	
DIAGNOSTICS	On-board diagnostics with LED indicators for receiver status	
INPUT VOLTAGE	95-130 Vac	
COMPATIBLE WITH	XLTX, MLTX, SLTX, *tele*Pendant, *tele*Pilot	



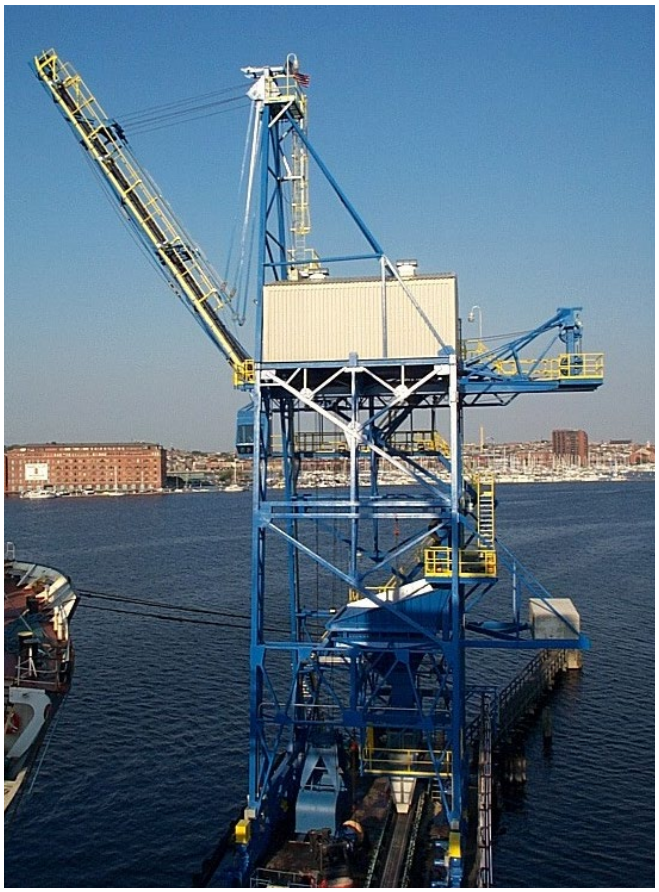
TELEMOTIVE 18K RECEIVER

OUTPUTS	Up to 64 relays	
INPUTS	Output monitoring	
COMMUNICATION	RS-232	
FREQUENCIES	Part 15 License Free Part 90 Licensed Two-way	430-440MHz 72-76MHz, 450-470MHz NA
OPERATING RANGE	300 to 500 feet	
DIAGNOSTICS	On-board diagnostics with LED indicators for receiver status	
INPUT VOLTAGE	100-240 Vac, 24-240 Vdc	
COMPATIBLE WITH	XLTX, MLTX, SLTX, *tele*Pendant, *tele*Pilot	

ENGINEERED SYSTEMS

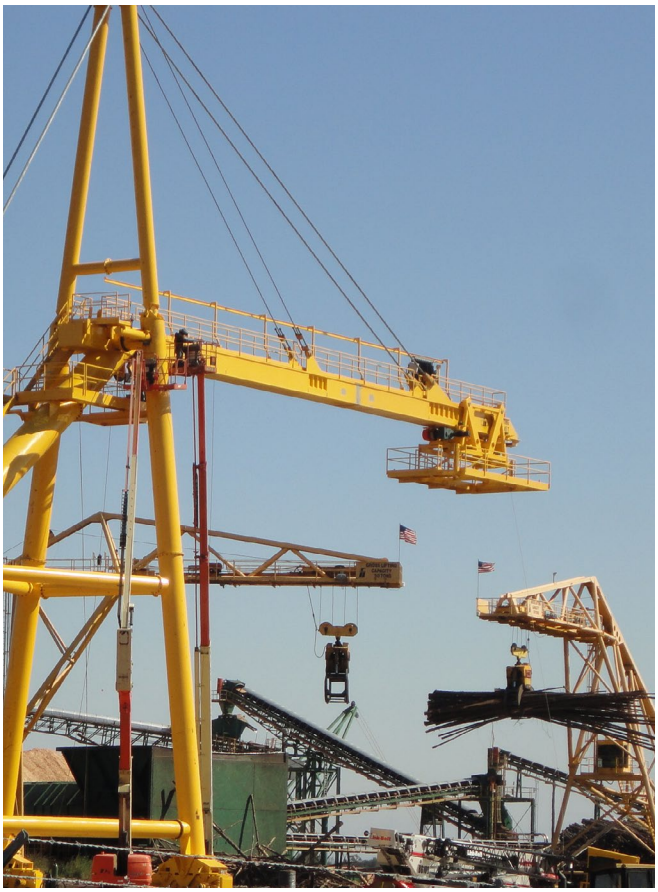
ENGINEERED SYSTEMS

- The Engineered Systems Group is dedicated to helping our customers achieve maximum performance from their material handling equipment.
- We help our customers identify, select, and implement the best mix of motion control technologies and leading-edge product offerings available for their specific application by providing:
  - **Project Evaluation** – we work with crane OEMs and end users to identify develop solutions to improve material handling performance
  - **Project Management** – we work as the interface between the customer, end user, and engineering and manufacturing
  - **Engineering Design** – our team of engineers design innovative controls and control devices to regulate the automated systems
  - **System Manufacturing and Testing** – each system is built and tested by certified engineers and product testers in Magnetek's ISO 9001:2000 certified, 63,000 sq. ft. manufacturing facility
  - **Field Start-up, Testing, Training and Support** – systems engineers are fully trained to provide a turnkey approach to design, manufacturing, testing, installation, and start-up
  - **Customer Training and Maintenance Support** – we offer on-site technical support, emergency crane control replacement, and on-site and in-house training programs



AUTOMATION SOLUTIONS

- Improve production efficiency and material flow
- Increase manufacturing throughput
- Increase uptime
- Improve product quality
- Enhance overhead equipment performance and reliability
- Reduce maintenance costs
- Improve operator safety
- Reduce parts/stock damage
- Use labor more efficiently
- Reduce labor costs
- Add system flexibility for future enhancements
- Improve positioning and inventory accuracy
- Decrease cycle time
- Integrate system diagnostics
- Increase storage capacity
- Reduce floor space
- Increase uptime



ENGINEERED CONTROL SYSTEMS

Magnetek helps you identify, select, and implement the best and most cost-effective mix of motion control technologies and leading edge product offerings to meet your application needs and provide future flexibility for your material handling systems.

We Have Extensive Experience Working With:

- Overhead/underhung cranes
- AISE mill duty cranes
- CMAA class "F" cranes
- AS/RS stacker cranes
- Aluminum, copper, and steel coil handling cranes
- Bucket cranes
- Conveyors
- Monorail systems
- Transfer cars
- AGVs
- Dockside cranes
- Storage systems
- Tankhouse cranes
- Waste handling cranes

Other Specialty Applications Include:

- Anti-Skew Control – Bridge tracking
- Anti-Swing Control – Reduces load swing
- Bucket Software – For wire rope bucket application
- Synchronized Hoist Control – Master/Slave hoist coordination
- Synchronized Trolley Control – Master/Slave trolley coordination
- Line Speed Matching – Crane to conveyor tracking
- Collision Avoidance – Crane to crane/equipment

Industries Served Include:

- Sheet Steel
- Hot Metal
- Lumber
- Automotive
- Paper
- Sugar
- Cement
- Textile
- Film Processing
- Converting
- Refuse
- Aerospace
- Marine Terminal
- Foundries

ENGINEERING DESIGN AND PLC/PC PROGRAM DEVELOPMENT

A team of engineers trained and experienced in circuit design, packaging of equipment, PLC, PC, and HMI program development will design your engineered system per the application requirements.

Our Applications Include:

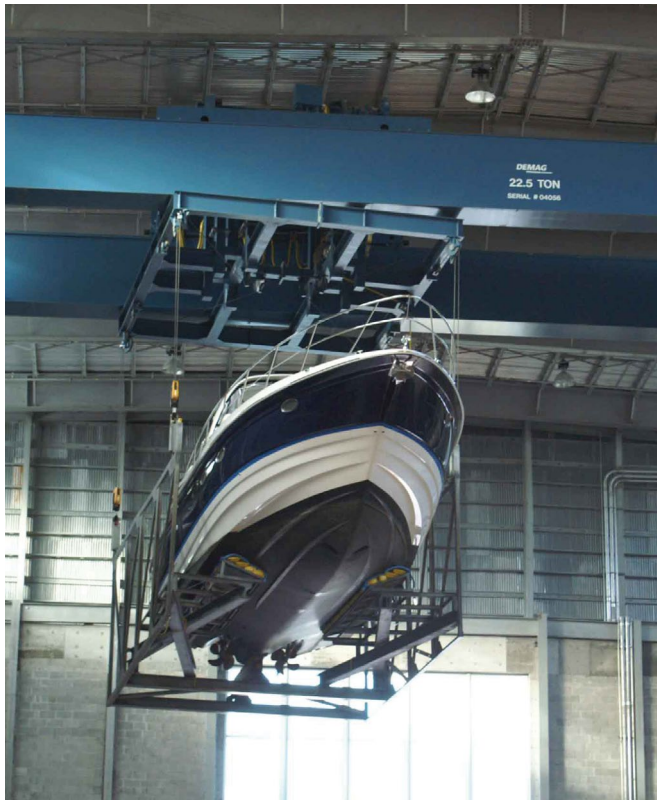
Coordinated Motion Control
- Coordination of crane/monorail operation
- Coordination of crane/conveyor operation
- Coordination of monorail/conveyor operation
- X-Y-Z axis control

System Communications
- Festoon systems
- Busbar communication systems
- Wireless communication control
  - Radio-based
  - Infrared-based
- Communication protocols (Controlnet, Devicenet, DH+, Ethernet/IP, Modbus, Modbus Plus, Profibus)
- Vendor/end-user communication interface Collision Avoidance Control
- Zone control
- Infrared solutions
- Laser-based solutions
- Restricted area control

Positioning Systems
- Laser
- Proximity sensor
- Photoelectric sensor
- Limit switch
- Conductor bar zoning
- Code rail

Status, Diagnostics and Upper Level Control
- HMI systems
- PC-based operator systems
- Digital line displays
- Remote monitoring
- Fault tracking
- Supervisory control
- Inventory control
- Bar code interface
- RFID interface

AUTOMATED DRY-DOCK BOAT STORAGE/RETRIEVAL SYSTEM



BRIDGE CRANE

Products

- Electromotive Systems IMPULSE®•G+/VG+ Series 2 Adjustable Frequency Drives
- Telemotive *tele*Pilot Radio Remote Controls
- Magnetek Festoon Systems
- Allen-Bradley PLC and HMI
- Laser Positioning Systems
- RFID technology

The System

An automated dry dock boat storage system utilizing an overhead bridge crane. The facility accommodates 125 boats up to 52 feet in length. The automated crane eliminates the need for fork trucks to store and retrieve boats. While fork trucks emit soot and grease which gets on the boats and can damage the hulls, the automated bridge crane operates quietly and cleanly, which is good for the residential community in which it resides. The automated crane controls are located at ground level for easy access. An Allen-Bradley HMI is programmed to display the occupancy status of each storage location and to key in information relative to new boats being entered into the system. A teach function is also provided to initialize new boats into the storage-retrieval system.

AUTOMATED LUMBER HANDLING CRANE SYSTEM

PULP/PAPER/FILMS APPLICATIONS

Products

- Electromotive Systems IMPULSE®•G+/VG+ Series 2 Adjustable Frequency Drives
- PulseStar Radio Remote Controls
- Hoist and Trolley Synchronization Controls
- Bridge Anti-skew Controls
- Hoist Anti-sway Controls
- Allen-Bradley PLC
- Laser Positioning Systems

The System

Two automated lumber handling bridge cranes, installed in two different facilities. Each crane contains two trolleys and utilizes Magnetek's Hoist Synchronization Software, Trolley Synchronization, Bridge Anti-skew Control, and Hoist Anti-sway Control. The cranes are automatically dispatched between the train unload area, the lumber storage locations, an outbound loading area, and a saw used to shorten the bundles as needed. These automated overhead solutions eliminate the need for fork trucks, thus reducing the spacing between aisles and doubling the storage capacity of the facility.

ENGINEERED SYSTEMS

AUTOMATED MILL ROLL HANDLING SYSTEM

Products

- Electromotive Systems IMPULSE®•G+ Series 2 Adjustable Frequency Drives
- SBP2® Pushbutton Pendant Stations
- Magnetek Festoon Systems
- Wireless Ethernet Communication
- Allen-Bradley PLCs
- Industrial PCs
- RFID Technology
- Laser Positioning

The System

Two fully automated bridge cranes and two automated transfer cars. The cranes and transfer cars interface with the end user's inventory management system and also includes an external interface with the orientor, slitter, and slabber machines. An industrial PC is used for complete system integration and HMI color touch screens are used for entering data and reporting system information.

AUTOMATED AUTOMOTIVE PARTS DIPPING SYSTEM

DIP TANK SYSTEM

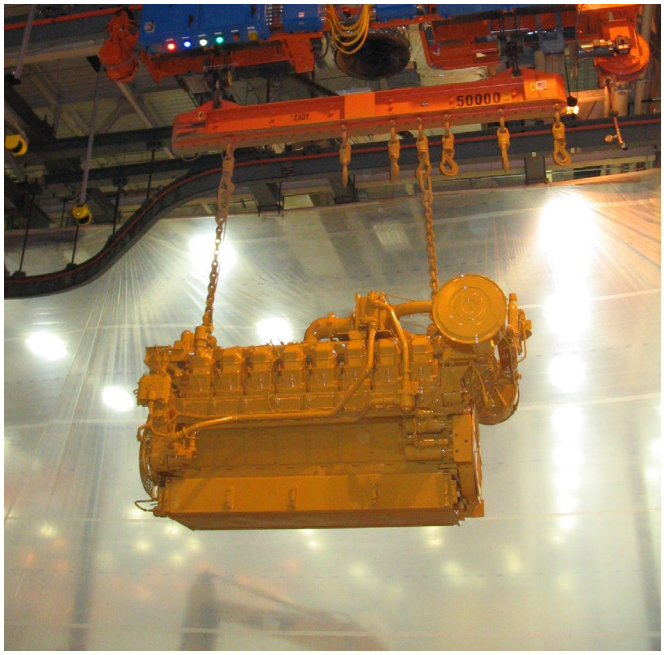
Products

- Electromotive Systems IMPULSE®•G+ Series 2 Adjustable Frequency Drives
- SBP2® Pushbutton Pendant Stations (manual back-up control)
- Telemotive telePilot Radio Remote Controls (manual back-up and maintenance control)
- Marathon Motors
- Magnetek Festoon Systems
- Allen-Bradley PLCs
- Laser Positioning Systems

The System

Four automated dipping cranes operating over a series of 16 tanks used in the electrostatic painting process for automotive parts. Each crane's rigid mast contains two hoists that are controlled separately and synchronously by two IMPULSE Drives. This allows the hoists to raise and lower the load evenly into and out of the tanks, and allows them to tilt in order to drain excess liquid from the parts before moving to the next tank. The bridge motions are also controlled by IMPULSE Drives. An HMI color touch screen operator interface is used for reporting system status and setting dipping cycle parameters.

AUTOMATED ENGINE PAINT LINE MONORAIL SYSTEM



MONORAIL SYSTEMS

Products

- Electromotive Systems IMPULSE®•VG+/G+ Series 3 Adjustable Frequency Drives
- PulseStar Radio Remote Controls (workstation operation)
- SBP2® Pushbutton Pendant Stations (maintenance control)
- FABA® Conductor Bar
- Allen-Bradley PLCs and HMIs
- Wireless Data Communication

The System

Thirteen automated monorail carriers that interface with wash booths, paint system robots, ovens, conveyor systems, and the end user's MRP system. The system's speed range is 1.75 FPM to 30 FPM with monorail system to conveyor system speed matching and wireless Ethernet RF communication between the main system controller and the monorail carriers. RFID technology is used for product tracking and HMI color touch screen operator interfaces report system status and monitor system progress.

AUTOMATED WHEEL AND STRUT PAINT LINE MONORAIL SYSTEM

Products

- Electromotive Systems IMPULSE®•P3 Series 2 Adjustable Frequency Drives
- Telemotive 18K Radio Remote Controls
- SLTX Transmitters (workstation operation)
- SBP2® Pushbutton Pendant Stations (manual back-up control)
- FABA® Conductor Bar
- Allen-Bradley PLCs and HMIs

The System

An automated wheel and strut paint system consisting of 15 automated monorail carriers (nine initially, six added later) with two separate product lines sharing one prime-and-finish paint processing system. HMI color touch screen operator interfaces are used to report system status, wireless Ethernet RF is used for communication between system controller and carriers, and RFID technology is used for product tracking.

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MH036_Product Flip Book
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